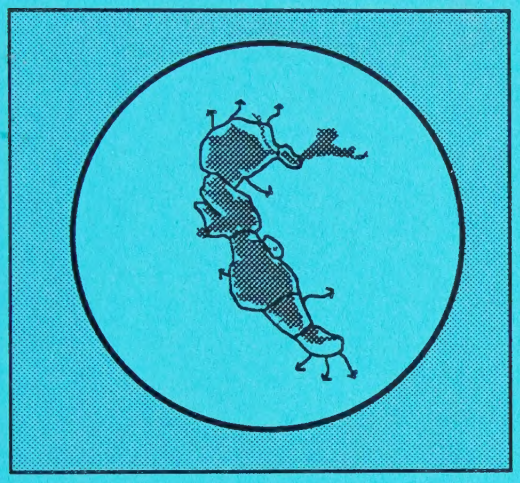
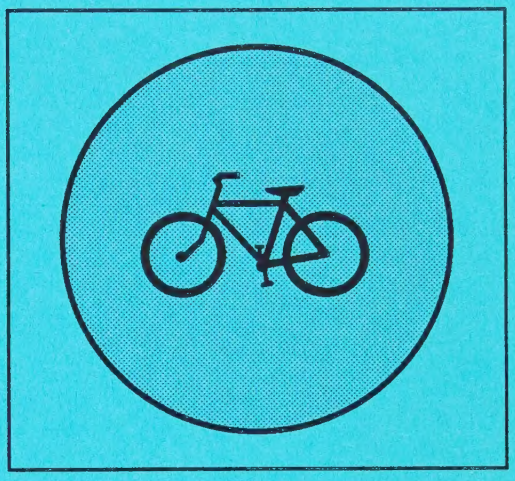
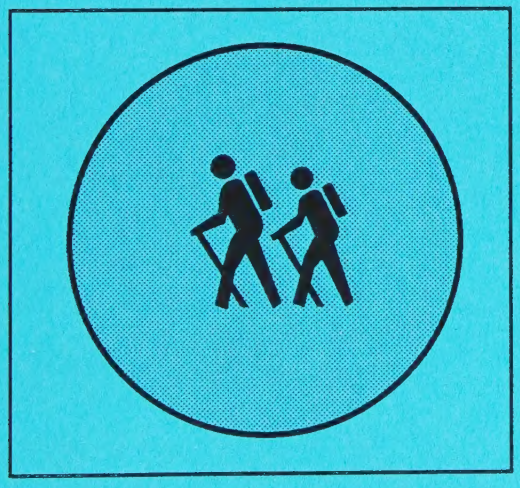
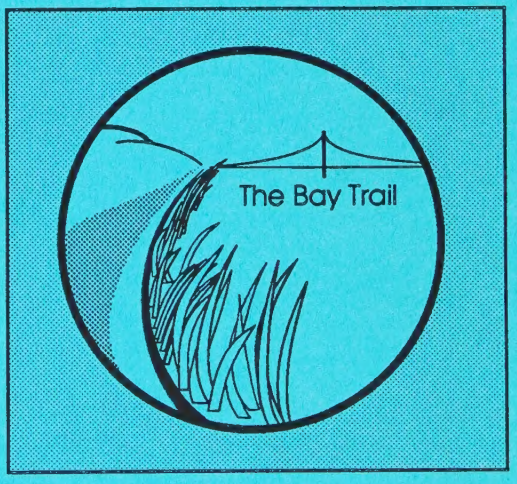
Final Environmental Impact Report

Bay Trail Plan









June, 1989

ABAG
ASSOCIATION OF BAY AREA GOVERNMENTS

MetroCenter
Eighth & Oak Streets
Oakland, CA
(415) 464-7900

Mailing Address:
P.O. Box 2050
Oakland, CA 94604-2050
Fax: (415) 464-7979

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Bay Trail Plan

Prepared by the Association of Bay Area Governments
MetroCenter
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Oakland, California 94604-2050

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Part I Purpose and Format of the Final EIR

Under the California Environmental Quality Act (CEQA) and state CEQA Guidelines, the Association of Bay Area Governments (lead agency) is required, after completion of a Draft Environmental Impact Report (DEIR), to consult with and obtain comments from public agencies having jurisdiction by law with respect to the proposed project, and to provide the general public with opportunities to comment on the DEIR. The Association is also required to respond to significant environmental points raised during the review and consultation period.

This Final EIR (FEIR) has been prepared to respond to public agency and general public comments received on the Bay Trail Plan DEIR which was circulated for review in February, 1989.

This document has been prepared in the form of an attachment or addendum to the DEIR as allowed by Section 15145 (b) of the CEQA Guidelines. Together with the DEIR, herein incorporated by reference, it constitutes the entire FEIR. The following sections of the FEIR include:

Part II

- Summary of comments received on the DEIR and a summary of public testimony received at the DEIR public hearing. •Lead agency responses to significant environmental points raised in the DEIR review process.

Part III

- FEIR Table 1-1, as amended (including revised Bay Trail Policies)
- FEIR Table 1-2, as amended
- Proposed Bay Trail Alignments, as amended

The Final EIR will be presented to the Association of Bay Area Governments Executive Board at their scheduled meeting on June 15, 1989. The Board will consider certification at that time.

Part II Summary of Comments and Responses to Comments

The Draft Environmental Impact Report (DEIR) for the Bay Trail Plan was released for public review on February 13, 1989. The deadline for written comments was March 31, 1989. A public hearing was held on March 1, 1989 before the Environmental Management/Open Space Subcommittee of the Association of Bay Area Government's Regional Planning Committee. No testimony was presented at the public hearing.

Written comments raising significant environmental issues on the Draft Environmental Impact Report prepared for the Draft Bay Trail Plan were received from the agencies, organizations and individuals listed below. (Complete text of written comments received in response to the DEIR and the Draft Bay Trail Plan are available for review at the Association of Bay Area Governments offices, 101 8th Street, Oakland, California.) For clarity, comments are grouped according to the section of the DEIR to which the comment relates. Summaries of comments are presented in *italics*, with the source of the comment in brackets following the comment. Amendments to the DEIR are underlined. In addition to amendments to the text of the EIR, revisions have also been made to Tables 1-1 and 1-2, which provide summaries of impacts and mitigations. Revised Tables 1-1 and 1-2 appear in Part III.

Federal Agencies

A1 U.S., Dept. of the Interior, Fish and Wildlife Service

State, Regional and Local Agencies

B1 Alameda County, Public Works Agency
B2 California State Department of Transportation
B3 East Bay Regional Park District
B4 Golden Gate Bridge, Highway and Transportation District
B5 Marin County, Planning Department
B6 Native American Heritage Commission
B7 San Francisco, Department of City Planning
B8 San Mateo County, Department of Environmental Management
B9 San Rafael, Planning Department
B10 Santa Clara Valley Water District
B11 Sonoma County, Department of Planning
B12 Sunnyvale, Parks and Recreation Department

Individuals and Organizations

C1 Environmental Forum of Marin
C2 Golden Gate Audubon Society
C3 League of Women Voters of the Bay Area
C4 Marin Audubon Society
C5 Save San Francisco Bay Association
C6 Frank Delfino

Section 1: Summary

Table 1-1, Bay Trail Plan Policies, Summary of Impacts and Mitigations

Bay Trail Policy # 7:

All levees will not be appropriate for trails. Revise policy to read, " New trails may be routed along existing levees only if environmental review indicates that such routing will cause no long-term impacts to wildlife and is consistent with all other policies of this plan." [C2: Golden Gate Audubon Society]

Response: Bay Trail Policies as drafted provide adequate consideration of thie issue through a variety of protective measures for trails in natural environments. As discussed in the EIR, development of individual projects to implement the Bay Trail Plan will require environmental review; however, this proposed revision suggests that new levee trails will be held to a higher standard of environmental review than CEQA specifies (i.e., "no long-term impacts). In addition, it raises questions as to what level of environmental review will be required to determine that "no long-term impacts" will be created, and who will determine whether or not these impacts will be present.

Design of new trails along existing levees should be coordinated with the operations division of the organization responsible for levees [B10: Santa Clara Valley Water District]

Response: Table 1-1, Policy 7, recommended mitigation is amended to read, "Coordinate design of new trails along existing levees with the operations division of the organization responsible for the levees. Investigate alternative trail surface materials, riprap levees, revegetate exposed surfaces."

Bay Trail Policy #8:

Buffering is essential to a successful Bay Trail. Revise policy to read "...buffering should be recommended.." [C2: Golden Gate Audubon Society]

Response: Policy #8 has been revised to read, "...Alternate routes should be provided where necessary and additional buffering/transition areas designed to protect wetland habitats should be provided where appropriate."

Bay Trail Policy #9:

Develop specifications for construction of small bridges so that filling of wetlands and loss of wetland vegetation is avoided [C3: League of Women Voters of the Bay Area]

Do not agree that new stream, creek and slough crossings are necessary. New paths leading to existing crossings can be constructed away from the creeks and sloughs thus eliminating the need for habitat destruction. Recommend deletion of last sentence in policy #9. [C2: Golden Gate Audubon Society]

Response: The intent of this policy is not to encourage the installation of bridges, but to signify that bridging is an alternative of last resort which, in some cases, may be preferable to rerouting the trail inland and denying trail users more direct routes of travel. Sites currently exist along the shoreline where planks and other debris have been used to create makeshift bridges. This can be expected to increase if people are using the shoreline (whether or not the Bay Trail is developed) and sensible alternative crossings do not exist. In these locations, bridging will be the environmentally superior solution to the problem of casual trails. Furthermore, BCDC does occasionally require bridging as part of its public access program. Other local agencies, recognizing the problems inherent in not providing sensible access, can plan and construct bridges to connect sections of shoreline trail whether or not they are included in the Bay Trail Plan. The policy as written represents a guideline for future site-specific trail planning, and underscores the Bay Trail Plan's concern that bridging be minimal.

Amend Table 1-1, mitigation for vegetation/wildlife impact to read, "...riparian vegetation. Bridge design and construction should minimize impacts on affected vegetation and habitat. Appropriate mitigations should be evaluated at the project level."

Bay Trail Policy #20:

Use "shall" in place of "may" and "should" to ensure that resource protection is mandatory. Policy should clearly state that the Bay Trail shall involve no destruction of wetlands either in it planning or implementation stages. [C3: League of Women Voters of the Bay Area]

Use of the word "should" implies the need to avoid adverse impacts on wetland is optional rather than mandatory. Shall should be substituted. [C5: Save San Francisco Bay Association]

Response: As indicated throughout the Bay Trail environmental protection policies, resource protection is a fundamental goal of the Bay Trail Plan. Guidance to local agencies in this regard is clear. Revising the policy to suggest that the action is mandatory would be misleading, insofar as the Bay Trail Plan is not a regulatory document and cannot prescribe or proscribe local agency actions. The provisions of the Bay Trail Plan do not supersede the requirements of CEQA, and policies have not been drafted so as to promote such a misinterpretation.

Bay Trail Policy #21:

Use "shall" in place of "may" and "should" to ensure that resource protection is mandatory. [C3: League of Women Voters of the Bay Area]

Response: Please see discussion under Policy #20 above.

Bay Trail Design Guidelines:

"High use" and "short distances" should be explicitly defined. (Table 1-1, plate 6) [B2: California State Dept. of Transportation]

Response: Precise enumeration of "high use" and "short distances" is unnecessary. These guidelines are not hard and fast standards, but general guidelines to be applied by local implementing agencies, consistent with their individual policies and the particular circumstances of each trail segment. Determination of the appropriate trail design will occur as each trail segment project is reviewed by implementing and managing agencies.

Table 1-2, Bay Trail Alignment, Summary of Impacts and Mitigations

Land Use Impact #3:

Duck clubs also provide legal hunting [C6: Frank Delfino]

Response: Table 1-2, Land Use Impact #3 is amended to read, "Existing hunting activity permitted in the wetlands of San Francisco and San Pablo Bay (including the San Francisco Bay National Wildlife Refuge) during the winter months..."

Land Use Impact #7:

Proposed mitigation measures also have environmental impacts, these should be addressed in the EIR. [B2: California State Dept. of Transportation]

Response: A generalized discussion (appropriate to this programmatic review) of environmental impacts associated with proposed mitigation measures is included in the DEIR, pages 55 through 59 and 67 through 69. Detailed discussion of these impacts is not necessary at this level of review. Please refer to response under DEIR Section 2, for a discussion of the appropriate level of analysis for this EIR.

Traffic and Circulation Impact #5:

In several locations, planned highway projects will conflict with the Bay Trail due to design objectives, limited space, and environmental constraints. This level of detail will require extensive, timely consultation with Caltrans prior to any implementation. [B2: California State Dept. of Transportation]

Response: Add mitigation, "Implementing agencies should consult with Caltrans early in the project planning phase where conflicts between proposed trail alignments and Caltrans facilities may occur."

Traffic and Circulation Impact #7:

Potential hazards of conflicting movements between bicyclists and vehicular traffic are not just to motorists, but also to cyclists. [B2: California State Dept. of Transportation]

Response: The failure of cyclists to observe the rules of the road will indeed create hazards to cyclists as well as motorists. Table 2-1, Traffic and Circulation Impact #7 is amended to read, "...hazards to drivers, as well as to themselves."

Traffic and Circulation Impact #8:

The proposed mitigation measures may not be viable or legal, i.e., closing routes, restrictions on truck movements [B2: California State Dept. of Transportation]

Response: The mitigations discussed here are identified as alternatives which should be considered as the project-level review is undertaken to determine the appropriate mitigation. The legality, as well as the appropriateness, of the response to each particular circumstance will be considered at that time.

Traffic and Circulation Impact #10:

Safety concerns will not permit bicycle use of freeway shoulders [B2: California State Dept. of Transportation]

Response: Allowing bicycle access on road shoulder is identified as one of a range of possible approaches to accommodating bicycle access on vehicle bridges. Caltrans' concerns relative to the use of shoulders for bicycling (ref: A Study Report for Bicycle Access on Bay Area Toll Bridges, Caltrans District 4, January 1988) is noted. The report states, "Riding on shoulders of confined freeway bridges, although preferred by some bicyclists, is discouraged...On freeway bridges, a substantial physical barrier of some type...should lie between the motorist and bicycle." Where this alternative is not feasible, one of the alternative forms of access should be considered.

Traffic and Circulation Impact #14:

High volume streets should not include bike trails [B2: California State Dept. of Transportation]

Response: The Bay Trail Plan is amended to include policy 10a, which states,"Whenever possible, new trails should be physically separated from streets and roadways to ensure the safety of trail users." Bicycle lanes currently exist and additional lanes are planned by local agencies on streets with high volumes of traffic. Although not generally preferred as trail alignments, these segments do exist and will be incorporated into the Bay Trail system, where necessary and appropriate.

Hydrology and Flooding Impact #1 & 2:

Recommended mitigations for impacts 1 & 2 should be spelled out that adverse impacts on sensitive areas which might result from temporary or indirect events such as construction or alteration of drainage patterns shall be avoided [C5: Save San Francisco Bay Association]

A range of suggested changes for Table 1-2, Hydrology and Flooding Impacts and Mitigation, are suggested. [B10: Santa Clara Valley Flood Control District]

Response: Table 1-2, Hydrology and Flooding is amended in response to these comments. Please refer to FEIR Table 1-2, as amended, located in Part III.

Vegetation and Wildlife Impact #1:

Recommended mitigation for impact 1 should read "The Policies of this Plan forbid the degradation of sensitive environments as a result of construction , operation or use of the trail. " [C5: Save San Francisco Bay Association]

Response: Mitigation discussion for Vegetation and Wildlife impact #1 is amended to read, "The Plan includes policies to protect sensitive environments from degradation during trail construction, use and management." In addition, the Plan is amended to incorporate Policy 36, which states, "Local agencies should be sensitive to the natural environment not only in project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built."

Provide for timing of trail construction to avoid nesting and other seasons that are important for wildlife use, such as wintering and migration seasons for migratory species, and to avoid the rainy season when siltation is likely to occur. [C3: League of Women Voters of the Bay Area]

Encroachment into environmentally sensitive bayfront areas could disrupt wildlife, especially during nesting season [B5: Marin County, Planning Dept.]

Response: Mitigation discussion for Vegetation and Wildlife impact #1 is amended to include the following: "Trail construction and maintenance should be timed to avoid nesting season and other times that are important for wildlife use (e.g., wintering and migratory season for migratory species)."

Recommendations to avoid impacts should include 1) relocating segments should it be discovered that wetlands would need to be filled or that significant degradation of habitats would occur; 2) not routing new trails along existing levees on which there is inadequate space for buffer/transition areas between trails and wetland habitats, 3) not upgrading existing trails along levees on which human use would have the potential to result in significant disturbance to wildlife and their habitat [C4: Marin Audubon Society]

Response: Proposed mitigations 1 and 2 are discussed above and in the response to comments regarding buffers in Section 8, Vegetation and Wildlife. Mitigation for Vegetation and Wildlife impact #1 is amended to include the following: "Existing levee trails should be maintained, but not upgraded, if upgrading would result in significant distubance to wildlife and their habitat."

Adopt a provision stating that future support facilities will not impact fish and wildlife resources, especially wetlands. [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Response: New Bay Trail Policy 20a incorporates this concern. It reads, "Future support facilities serving the Bay Trail should be designed and constructed in such a manner that they do not impact fish and wildlife resources, especially wetlands. These facilities should be located and designed in a way that no fill of wetlands will be required."

Vegetation and Wildlife Impact #2:

Use and overuse of trails near wetlands should be discussed [C3: League of Women Voters of the Bay Area]

Recommendations for mitigations to reduce impacts should include: 1) providing for measures or methods to reduce use on any segments that are or could become overused thereby resulting in significant impacts to wetland habitats ; 2) provide buffer/transition areas that are alt least 100 feet wide adjacent to all wetlands; planting of buffer transition areas with native vegetation suitable to provide cover and foraging habitat and to buffer the impacts of increased human use; 3) installing fencing to discourage human intrusion into buffer;transition areas; 4) requiring creation of new wetland that is of the same habitat type in the same vicinity and is at least double in size of the wetland lost for any absolutely unavoidable small fill that would result from bridge crossing or erosion control; 5) installing signs to educate the public about why there should remain on trails; 6) signing to prohibit litter, placing of conveniently located receptacles, and establishing a regular maintenance plan for litter and debris. [C4: Marin Audubon Society]

Response: Mitigation for Vegetation and Wildlife Impact #2 is amended to include the following: "Trail segments which experience levels of use beyond their capacity or which use creates significant impacts to wetland habitats should be evaluated for use restrictions, redesign or relocation. Mitigation #1 is amended to read, "Design of buffers may include fencing, native vegetation, or physical distance separating the trail from wildlife habitats. The specific design must be determined after site-specific review and evaluation of alternatives. " For more discussion of buffers, refer to Section 8, Vegetation and Wildlife. New policy 16a and revised policy 19 respond to signage comments.

Provide signing that educates users about the value of adjacent habitat and why it is important that they stay on the trail [C3: League of Women Voters of the Bay Area]

Response: The Plan is amended to include policy 16a and revisions to policy 19:

16a: The Bay Trail signing program may include necessary cautionary and regulatory signing, including warnings of seasonal trail closings and other restrictions on trail use. Interpretive signing may be provided to help educate trail users about the surrounding environment and the importance of observing trail use restrictions and staying on designated trails.

19. The trail head signing program may include a variety of information which will enhance the Bay Trail experience. This may include a description of the length and relative difficulty of the trail as a guide for trail users with mobility limitations, available support facilities, available access to other connecting trails, and a description of the habitat resource which emphasizes interpretive information as well as the need to observe posted trail use restrictions.

Noise Impact #3:

The signage mitigation should be accompanied by a monitoring and enforcement plan [B2: California State Dept. of Transportation]

Response: The Bay Trail Plan recognizes the authority of managing agencies to set policies regarding the use of trails within their jurisdiction (Policy 33). The limits of the Bay Trail Plan's authority to enforce and the opportunities for monitoring activities are discussed in responses to DEIR Section 2, below.

Comments regarding the specificity of the EIR and the nature of subsequent environmental review:

Specify how site-specific environmental review will be done; specify the type of public and resource agency review proposed alignments will have [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Identify methodologies that subsequent environmental documents will employ at the specific project level. [B2: California State Dept. of Transportation]

Direction to local entities throughout the document is not adequate to ensure that potential impacts will, in fact, be adequately addressed or that adequate mitigations will be considered and required as individual segments are planned and constructed. The mitigation sections should be revised to clearly indicate to local jurisdictions that mitigations are needed for specific impacts, and to include additional mitigations. Substitute "shall" wherever "can" or "may be incorporated" in connection with mitigations.

The DEIR is not sufficient to enable implementing agencies to avoid unnecessary environmental impacts because it does not provide a specific and comprehensive identification of consideration of the project impacts. [C4: Marin Audubon Society]

Response: The Bay Trail Plan is not a regulatory document and has no regulatory authority. No local agency is required to implement the plan, nor do provisions of the Bay Trail Plan prohibit any local agency from taking actions which are inconsistent with the Plan. The Plan recognizes the authority of local agencies to set policy regarding the use of trails within their jurisdiction (Policy 33). Furthermore, the EIR recognizes that the alignments proposed in the Bay Trail Plan are subject to individual local action and will require refinement prior to implementation.

The Bay Trail Plan proposes a framework of action (policies and a proposed, general alignment) to implement a recreational trail. Implementation of the Plan will require a multitude of individual actions taken primarily at the local level. Details of precise trail alignment, use or design will not be defined until project-level, site-specific planning is undertaken. Because of the general nature of the Bay Trail Plan , site-specific analysis is beyond the scope of this review. CEQA Guidelines Section 15146 state that the degree of specificity required in an EIR should correspond to the degree of specificity involved in the project which is described in the EIR. The Bay Trail Plan is a policy document which creates a framework for subsequent action by agencies which will pursue implementation of specific trail projects. Detailed review of precise trail alignments and site review is beyond the scope and intent of this project. This level of review and analysis will appropriately be addressed at the project planning stage, when precise, rather than general, trail alignments are selected. Each agency which undertakes implementation of Bay Trail segments will bear the responsibility for conducting environmental review for that proposed project, consistent with the requirements of the California Environmental Quality Act (CEQA). This may or may not include preparation of an environmental impact report.

Comments regarding monitoring/reporting program for mitigations:

Develop a maintenance-monitoring plan for the Trail that ensures patrolling of remote areas, repair of damaged/dangerous segments, control or erosion, adequate provisions for the protection of nesting and wintering wildlife and other important wildlife areas. [C3: League of Women Voters of the Bay Area]

What monitoring and enforcement mechanisms will ensure that mitigations will be carried out? AB 3180 requires establishment of a reporting or monitoring program to ensure compliance with mitigation measures. [C3: League of Women Voters of the Bay Area]

Response: The EIR concludes that the Bay Trail Plan poses no significant environmental impacts, as defined by CEQA. AB 3180 requires adoption of a monitoring or reporting system if mitigations are proposed to mitigate significant impacts. Since no signficant environmental impacts are anticipated, and no mitigations are proposed to offset significant impacts, adoption of a reporting or monitoring program is not required.

The Bay Trail EIR identifies a range of possible impacts which may occur during local implementation of specific trail segments, depending on the nature of the proposed project. The EIR further points out that identification of specific impacts for specific trail development is not possible at this level of analysis, due to the general nature of the Bay Trail Plan. It recognizes the need to identify specific trail alignments, design, etc., prior to detailed evaluation of environmental impacts. The recommended mitigations identified in Tables 1-1 and 1-2 are designed to illustrate the manner in which Bay Trail policies provide general protection against environmental impacts, and to suggest possible mitigations for project-level impacts which should be considered by local agencies as they seek to implement segments of the Bay Trail.

The proposed implementation structure for the Bay Trail Plan identifies one of the Bay Trail Committee's responsibilities as preparing an annual monitoring report. This report should include a discussion of progress achieved in implementing the Bay Trail Plan, including the success of the Project in encouraging local agencies to implement Bay Trail policies. This monitoring report should not, however, be regarded as a monitoring report prepared pursuant to AB3180 or related to CEQA requirements.

Figure 2-2

Santa Clara County Segment:

Relocate alignment at Moffet Field inland between housing and field facilities to avoid possible fill and other impacts to wetlands and to ensure safety of users. The proposed location is remote, unsafe and difficult to supervise [C3: League of Women Voters of the Bay Area]

Response: This segment of proposed trail was not recommended for relocation by the Bay Trail Committee. Pier-supported fill is recommended as one alternative alignment. Use of an existing levee was recommended as the other alternative. The only alternative to these alignments results in the trail's diverting across US 101, to the west, and conflicts with freeway-bound traffic. Trail users, unlikely to use this segments, would continue to trespass on levees, continuing current practice. Development of the Bay Trail as proposed, including a management program for the trail prior to development and use (which will be required by the managing agencies) is an environmentally-superior alternative to trail relocation.

Alameda County Segment:

Some of the additional trails may impact on the Alameda County Flood Control District's channels, which may not be appropriate for trail use at this time [B1: Alameda County, Public Works Agency]

Response: Comment noted. Future consideration of local trail development prior to implementation of Bay Trail segments along channels will require consultation with appropriate flood control districts, according to jurisdiction.

Napa and Sonoma County Segments:

Routes in Napa and Sonoma Counties as well as other locations in District 4 which may not have sufficient shoulder width to accommodate class III trails [B2: California State Dept. of Transportation]

Response: Comment noted. Route 121 in Sonoma County, between Big Bend and SR 37 has been deleted. Detailed review and consultation with Caltrans will be required prior to any project approvals involving roadways under Caltrans' jurisdiction, as Caltrans' communications note. In addition, as local agencies review segments of trail for implementation, Caltrans' standards that adequate road shoulders be present for Class III facilities will be applied, consistent with local agencies' established practices. Where shoulder width is insufficient to warrant creation of a Class III trail, other alternatives will be sought (including trail relocation and development of a class I facility).

Marin County Segment:

Northwest Pacific Railroad Right-of-way (Plate 10):

The NWP RR ROW will be insufficiently wide to accommodate trail and either commuter light rail or two-lane busway north of McInnis Park, without fill. Suggest alternative trail route north of McInnis Park, use levee along norther border of McInnis Park, connecting to existing levee along the Bay to Hamilton Air Force Base [B5: Marin County, Planning Dept.]

Delete trail segment along NWP RR ROW, due to need for filling to accommodate trail and other possible transportation plans [C4: Marin Audubon Society]

Loss of wetlands through bay fill would result from trail use of NWP RR ROW. [C1: Environmental Forum of Marin]

Relocate segments through north Marin that would involve filling of seasonal wetlands [C3: League of Women Voters of the Bay Area]

Response: Various alternatives for use of the NWP ROW are still being considered. The Bay Trail Advisory Committee, in reviewing these comments, concluded that this segment should remain as an alternative until the final determination regarding use of the RR ROW has been concluded. At that time, trail relocation may be necessary. The alternative trail route north of McInnis Park recommended by the Marin County Planning Dept. has been recommended as a spur trail in the revised trail alignments.

San Rafael Shoreline (Plate 10):

In accordance with environmental protection policies and proposed plans for East San Rafael shoreline, redesignate east San Rafael Shoreline Band as spur rather than spine trail [B9: San Rafael, Planning Dept.]

Response: The trail segment along the San Rafael Shoreline Band has been redesignated a spur trail. Alternative routing has been recommended along the proposed Anderson Rd extension (see revised alignment section).

Paradise Drive and San Pedro Road (Plate 10):

Delete alignments along Paradise Drive and San Pedro Rd in Marin County because they are windy, narrow roads that pose a safety hazards [C3: League of Women Voters of the Bay Area]

Safety concerns for hikers and bicyclists travelling alongside motorists on Paradise Drive and North San Pedro Road [B5: Marin County, Planning Dept.]

San Pedro Rd and Paradise Drive have many blind curves and insufficient shoulders to safely accommodate the existing vehicle and bicycle use, much less an additional trail. Alignments along these roads can be anticipated to bring significant numbers of new users which would exacerbate the already unsafe conditions. recommend elimination [C1: Environmental Forum of Marin]

The safety aspects of the trail, as well as potential need for grading, fill and environmental impacts of construction of retaining walls on narrow roads should be identified and discussed as potential impacts. These segments should be eliminated. [C4: Marin Audubon Society]

Response: Trail segments along Paradise Drive and San Pedro Road in Main County were retained by the Bay Trail Advisory Committee. They are currently used by cyclists, and as public streets, are likely to continue in use. Important destination points on the Bay Trail (Paradise Beach County Park, China Camp State Park) are accessible only from these routes. If, after detailed review of the proposed alignments at the project level is undertaken and concludes that Caltrans standards for adequate shoulder width cannot be met, signing of this route as a class III segment of the Bay Trail will not be possible.

Section 3: Land Use

Section 3.1: Setting:

Regulatory setting

U.S. Corps of Engineers has regulatory authority over transportation structures; U.S. Fish & Wildlife Service is involved any time a permit is requested from the Corps [C6: Frank Delfino]

Current name of law from which the Corps derives its authority to regulate wetland fills is Section 404 of the Clean Water Act. The sentence stating that transportation structures are exempted from the Corps regulatory authority is erroneous and should be deleted. The recommendation should be made that implementing agencies contact to the Corps, to determine Corps jurisdictional authority and the need for a permit, during the planning phase for any segment of the trail that involved any activities in or near wetlands. [C4: Marin Audubon Society]

The California Dept of Fish and Game issues a Streambed Alteration Agreement (this is not a permit) [C4: Marin Audubon Society]

While some very minor improvements to existing transportation structures may be exempt from Army Corps Section 404 authority under a Nationwide Permit, for the most part, transportation structure are regulated under Section 404 of the Clean Water Act [C2: Golden Gate Audubon Society]

Regulatory framework section should be revised to include the Regional Water Quality Control Board, which is also an agency with regulatory authority over wetlands, and to clarify that the Army Corps of Engineer s should be contacted for all segments that will involve activities in wetlands. As far as we are aware, transportation structures are not exempt from Corps regulatory authority [C1: Environmental Forum of Marin]

Response: Section 3.1, p. 34 is amended as follows:

U.S. Department of the Army, Corps of Engineers: References to Section 404 of the Pollution and Control Act of 1972 are amended to read "Section 404 of the Clean Water Act." The last sentence (beginning "Transportation structures...") is deleted.

U.S. Fish and Wildlife: This section is amended to read, "A non-regulatory agency, the Fish and Wildlife Service advises the Corps of Engineers on projects involving dredge and fill activities in waters and wetlands of the United States. Involvement by the Fish and Wildlife Service would be triggered by any proposed trail implementation which would require a permit from the Corps. Fish and Wildlife serves as an advocate for the preservation and restoration of aquatic and wetlands ecosystems.

California Department of Fish and Game: The last sentence is deleted. The first sentence is amended to read, "...agencies (including the Corps of Engineers, which consultation is required by the Fish and Wildlife Coordination Act) and has authority to issue streambed alteration agreements.

The section is amended to include the following additional discussion, "S.F. Bay Regional Water Quality Control Board: The Regional Water Quality Control Board reviews activities which may affect water quality in the Bay and its tributaries in order to protect and enhance the quality of surface and underground water supplies.

Section 3.2: Impacts

Page 56: Illegal hunting activities and target shooting can pose a safety problem for trail users during any season [C6: Frank Delfino]

Response: Page 56, paragraph 2 is amended to include the following: "Illegal discharge of firearms may also pose a safety hazard for trail users."

Page 56: Mention potential land use conflicts and safety hazards that may arise from locating trails adjacent to agricultural lands (disruption of livestock, fire hazard) [B11: Sonoma County, Department of Planning]

Response: Page 56 is amended to insert the following after paragraph 2: "Conflicts with land in active agriculture are likely to be most severe where the trail is developed as a class I facility along an abandoned railroad right-of-way. Litter, increased fire hazard and the potential for disturbance of livestock are possible where trail users can gain entry to agricultural lands. Page 58, paragraph 7 is amended to include the following: "In agricultural areas, new trails along railroad rights-of-way should be fenced to preclude unauthorized access and disturbance to livestock. Warning signs should be installed to advise trail users to stay on the trail. Staging facilities, which encourage picnicking or congregating, should not be located in these areas. Agreements for managing the trail should stress appropriate levels of patrolling on these segments of trail." See also Table 1-2, new Land Use impact #15.

Page 57: The safety of trail users should be identified as impacts and discussed [C3: League of Women Voters of the Bay Area]

Response: Safety issues are discussed on pages 56 and 57 of the DEIR.

Page 57: Address land use conflict with airports in final EIR [B8: San Mateo County, Dept, of Environmental Management]

Response: Page 57, paragraph 7 is amended as follows: Incompatible or hazardous....like military bases and general aviation facilities. Moffett Field...conflict. In addition, general aviation airports in San Bruno and Palo Alto are located adjacent to the proposed trail alignment.

Page 59: Paragraph 4 is amended to include the following: "Fencing should be used to confine trail users to the path and to prevent unauthorized or direct access to airport facilities from the trail."

Page 58: Increased use of public park property parking areas for trail staging could result in added impacts for facilities already at capacity during peak use periods. Further consideration of access to trails by transit, or use of nearby parking facilities is suggested as a way to mitigate potential parking impacts [B7: San Francisco, Dept. of City Planning]

Response: Page 58, paragraph 8 is amended to read, "Draft Bay Trail policies recommend incremental improvements to staging areas. In the interim, opportunities for use of private parking lots should be investigated and agreements negotiated where feasible. Transit access to the trail should be strongly encouraged, as well, consistent with Bay Trail Policies 9a and 29a.

Page58: ABAG develop funding initiatives with the State of California to support implementation and development of the Bay Trail Plan, to reduce pressure on existing facilities. [B12: Sunnyvale, Parks and Recreation Dept.]

Response: Page 59, final paragraph is amended to include the following: "More effective use of existing funding sources and development of new sources of funds for trail development will be necessary to support expeditious implementation of the trail. Bay Trail policies 37 and 38 call for increased assistance and support for local governments in their attempts to secure funding.

Section 3.3: Mitigations

Page 58: The effects of widening an existing trail so that it affects wetland habitat, by either filling, reducing or eliminating buffer/transition areas, should be identified as potential impacts. Although alternatives are noted that would not impact wetland habitats, the mitigation discussion should clearly recommend against a redesign that would impact wetlands. [C4: Marin Audubon Society]

Response: Separate discussion of impacts of trail widening is unnecessary, since Bay Trail policies address trail widenings as well as new trail construction. Review of alternative solutions to address overuse of trails will be appropriately considered at the project level, where site-specific impacts can be identified and mitigated, where necessary.

Page 59: Discussion concerning vegetative screens and fencing to protect wildlife from human disturbance should state that exceptions should be made for this purpose. [C4: Marin Audubon Society]

Response: Page 59, paragraph 3 is amended to read, "Exceptions should be made in cases where protection of wildlife..."

Section 5: Traffic and Circulation

Section 5.1: Setting

Page 64: Larkspur Ferry should be noted in DEIR as being located on an existing trail that is planned as a segment of the trail. [C4: Marin Audubon Society].

Response: Page 64, first paragraph is amended to read, "...commercial ferry terminals at Vallejo, San Francisco, Larkspur and Sausalito...

Page 65: Revise to reflect the final EIR for the Carquinez Shoreline Trail and staging g areas, which specifies that the trail will not be developed along the portion of Carquinez Scenic Drive affected by these trucks until after they have either been rerouted or have ceased to operate along that route. [B3: East Bay Regional Park District]

Response: Page 65, paragraph 7, sentence 6 is amended to read, "The final EIR for the Carquinez Shoreline Trail and staging areas specified that the portion of the trail along Carquinez Scenic Drive which is affected by traffic from the Ozol Terminal will not be developed until the trucks have been rerouted or have ceased to operate along that route."

Section 5.2: Impacts

Page 67: The strong gushing wind on high structures should be considered a significant hazard [B2: California State Dept. of Transportation]

Response: Page 68, first paragraph is amended to read, "...across the vehicle bridges enumerated herein. Some of the spans may be subject to strong gushing wind. Where a class I design is selected for trail access,these conditions may pose a hazard to trail users." Page 69, paragraph 4 is amended to read, "Where strong gushing winds are likely to pose a hazard to trail users, design of a class I facility must take this into account and provide adequate protection."

Page 67, 68: Cost estimates for bridge crossings should be developed. EIR process should be concerned with the cost/effectiveness of proposed bridge access. Impacts on bridge design should be included in this section. [B2: California State Dept. of Transportation]

Response: Design of Bay Area bridges varies markedly. Solutions to trail access on existing bridges can only be evaluated at the project level, when specific design considerations can be addressed. Cost of trail access on existing bridges will vary with the form of access which is recommended. The specifics of these questions cannot be addressed until specific proposals for access are developed. The Bay Trail policies provide for a general recommendation supporting bridge access, and do not specify that this access must be in the form of a class I facility. Furthermore, Bay Trail Policy 29 encourages cooperative funding of trail facilities on bridges; it must be noted that funds for bridge improvements come from a variety of sources, including toll revenues and gas tax funds, which are generated from a broad base of motorists (including some who bicycle and hike). These funds are, by law, available to alternative forms of transit.

Section 5.3: Mitigations

Page 68: The Plan and EIR lack a specific discussion of transit access, although they do advocate use of transit in a general sense and mention the importance of publicizing transit as a means to decrease auto impacts. Include: 1) policy emphasizing transit access to the Bay Trail, 2) include ferry access to the trail on Figure III-6 (transit systems connections map) 3) include complete analysis of transit access to the trail by specific location, including transit stops and facilities, 4) policies should reflect the concept of taking full advantage of transit access [B4: Golden Gate Bridge, Highway and Transportation District]

Page 69: The primary mode of travel to the trail is assumed to the the automobile, recommend that focus of publicity associated with the trail be to encourage alternative modes of transportation [C1: Environmental Forum of Marin]

Response: New Bay Trail Policies 9a, 9b, and 29a incorporate these comments.

Page 69: Wherever possible, new trails should be physically separated from streets and roadways to ensure the safety of trail users. [B2: California State Dept. of Transportation]

Response: New Bay Trail Policy 10a incorporates this comment.

Section 6: Hydrology and Flooding

Section 6.1: Setting

Page 70: Include San Francisquito Creek as a principal stream [B10: Santa Clara Valley Water District]

Response: The parenthetical reference in item #2 is amended to include San Francisquito Creek.

Page 70, 4th paragraphs revise wording to read "Stretches of plains and areas of underlying bay mud. Last sentence.....cyclical flooding should be periodic flooding." [B10: Santa Clara Valley Water District]

Response: Page 70, paragraph 4 is amended to read, "...areas of underlying bay mud. ...development from periodic flooding."

Page 72, general comments [B10: Santa Clara Valley Water District]

Response: These comments are incorporated into the amended text, which reads:

Page 72: Replace paragraph 3 with the following: Flood control responsibilities in the Bay Area to protect the public and property from flood hazards are handled by special flood control districts or by public works departments of the local cities and counties. A flood control project may consist of dams and reservoirs, floodwater storage basins, creek channelization and/or levees. The agencies provide necessary flood control project maintenance, including the removal of silt and debris from flood control channels and natural creeks. In some areas the Bay Trail is proposed to be located on top of flood control levees, cross flood control channels, and otherwise cross property owned by districts or land to which they have an easement. Development of the Trail in areas where the districts have real property interest will require agreements with the districts.

Page 72, paragraph 5: In Santa Clara County, the trail is proposed along portions of levee tops on the major streams, Stevens Creek, San Tomas Aquino Creek and Guadalupe River levees are above the 100-year flood level. Levees on the bay side in Sunnyvale's Bayland Park and most of the levees along Coyote Creek in San Jose are currently below the 100-year flood elevation. Santa Clara Valley Water District expects that these levees will be raised in the future to provide 100-year flood protection.

Page 72, paragraph 6: The most extensive and damaging flooding recently in Santa Clara County has been...

paragraph 7: Policy regarding public recreational use of flood control right-of-way and structures varies considerably from one jurisdiction to another. San Mateo County does not have any established policy. The Santa Clara Valley Water District would require a joint use agreement with a public agency that would assume the responsibility for development and maintenance of public recreation facilities, and liability for their use by the public. Any bridges...areas.

Section 6.2: Impacts

Page 73, general comments [B10: Santa Clara Valley Water District]

Response: These comments are incorporated into the amended text, which reads:

Page 73, paragraph 6: Flood control operations, particularly the removal of silt...

Page 73, paragraph 7: In some South Bay areas where the trail is proposed to be located on top of levees which are currently not at 100-year flood protection levels and further raising is anticipated, some all-weather trail surfaces would not be compatible with levee improvements. An all-weather surface would have to be removed before the levee could be raised. The cost of installing and removing an all-weather trail may not be warranted if the use of the trail prior to levee improvements is limited.

Page 73, paragraph 9: The Bay Trail's proposed proximity to floodwater on flood plains...

Page 73: Discussion of surface hydrology should recognize that construction or maintenance of an existing trail may alter surface flows and thus indirectly impact wetlands. [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Response: Page 73: Amend paragraph 5 to include the following: "Wetlands may also be indirectly affected by alternative of surface flows, resulting from trail construction or maintenance."

Page 73: *Impacts on water quality due to asphalt survacing should be discussed [C3: League of Women Voters of the Bay Area]*

Response: The Bay Trail does not recommend asphalt surfacing in natural areas, such as wetlands. The Bay Trail guidelines identify the need for a firm surface, such as a natural surface (graded levee) or decomposed granite surface, which would not have the potential to degrade water quality.

Page 73: BCDC study on Sea Level Rise concludes that FEMA does not adequately address the predicted rise in sea level. DEIR should review this study in relation to levee heights. [C4: Marin Audubon Society]

Response: The rising sea level and its implications for the San Francisco Bay Area are currently the focus of attention of lgovernment agencies throughout the region. Preliminary studies indicate that inundation of large portions of the Bay Area will occur as the sea level rises, unless protective measures are taken. Should shoreline areas be inundated, sections of the Bay Trail would be lost. Improvements, such as raising of levees, if undertaken, would not be pursued solely for the Bay Trail, but for flood control protection for Bay Area communities. Where levees with public trail access exists are raised, Bay Trail Policies would support trail replacement consistent with other Bay Trail policies.

Section 6.3: Mitigations

Page 73, Paragraph 5 should be revised to include the following sentence: "The Bay Trail segments in proximity to flood control facilities should be designed in close cooperation with the local agencies responsible for providing flood protection in order to ensure that the trail is compatible with flood control functions." [B10: Santa Clara Valley Water District]

Response: Page 73, paragraph 6 is amended as follows: Flood control operations, particularly the removal of silt...damage. The Bay Trail segments in proximity to flood control facilities should be designed in close cooperation with the local agencies responsible for providing flood control protection in order to ensure that the trail is compatible with flood control functions..

Page 74: While occasional levee reconstruction or grading is perhaps necessary, we hope that such reconstruction will take place only for flood control or salt-making reasons Such activity should not be generated by trail needs along. Grading, and particularly the raising of levees often requires new fill into Bay or salt pond waters. Section 6.3, paragraph 2, should be revised to require that all trail grading take place only when normal levee maintenance work is taking place, thus eliminating the extra levee disruption that is solely trail generated. [C2: Golden Gate Audubon Society]

Page 73: Consider impacts on wetland habitats resulting from erosion control activities, such as riprap and retaining walls, that could be needed for the Trail. Potential water quality impacts as a result of using oil-base surfaces, such as asphalt, should be discussed . As mitigation, recommendation should be made that new trails which would or could require erosion control measures that would affect wetland habitats be relocated so that the potential impacts are avoided, or another surface used. [C4: Marin Audubon Society]

Response: Bay Trail Policy 21, as well as the trail design guidelines, specify that the trail surface should be appropriate to the terrain. Many existing levee trails in natural areas are not improved for public access (either with additional erosion control measures or with an improved surface) and the policies nowhere suggest that such physical improvements are necessary for new segments of trail. When specific projects are undertaken to provide for public access on levees, the nature of needed improvements will be determined by the implementing agency. At that time, issues of levee use for other purposes (flood control activities), appropriate surface, use restrictions, etc., will be determined by the implementing and managing agencies. New Bay Trail Policy 36 encourages local agencies to be sensitive to the natural environment in all aspects of trail management.

Section 7: Geology and Soils

Section 7.3: Mitigations

Page 79: Sterilization of basement soil to preclude possible weed growth through pavement" should be removed as an acceptable mitigation measure [C6: Frank Delfino]

Response: Appropriateness of this mitigation will be determined by each implementing agency, consistent with standards and practices for development of bikeways. In general, Bay Trail policies would not support this mitigation in natural and environmentally-sensitive areas. Bay Trail policy 36 encourages local agencies to be sensitive to the natural environment in construction, management and maintenance activities.

Section 8: Vegetation and Wildlife

Section 8.1: Setting

Page 80: Change reference to Army Corps of Engineer's permit authority over transportation structures. [C2: Golden Gate Audubon Society]

Response: Page 80, paragraph 6: Second sentence is amended to read, "The Corps of Engineers issues permits for the discharge of dredge or fill materials in wetlands."

Page 81: Revise wetlands discussion to clarify the difference between upper marsh zone and transition zone. [C2: Golden Gate Audubon Society]

Page 82: Discussion of high-marsh zone and transitional habitat should be revised. High salt marsh is marsh that is subject to tidal action only at the highest tides. It is characterized by typical high-marsh zone salt marsh vegetation that is adapted to only period inundation by tidal waters. Transition areas, on the other hand, are typically upland areas adjacent to tidal marshes characterized by upland or ruderal vegetation. Upland transition zones provide critical refugia habitat for many species which cannot swim during high tide. They also provide nesting habitat for some species and serve to buffer impacts of human activities. [C4: Marin Audubon Society]

Page 82: Discussion of wetlands habitats should be expanded to distinguish between the high-marsh zones and upland transition zones; to include a discussion of the importance to wildlife of the upland transition zones, to provide a more accurate a complete description of seasonal wetlands, to recommend mitigation for all potential loss of wetlands. Recommended mitigations for loss of any wetlands should be by avoiding the impact by relocating the trail. [C1: Environmental Forum of Marin]

Page 82: More complete discussion of seasonal wetlands is needed. They occur frequently in diked former tidelands, would be impacted by the trail in Marin and likely in other north Bay counties. These wetlands provide important habitat for migratory waterfowl and shorebirds during the winter months and are a critical part of the diverse habitats of the Bay [C4: Marin Audubon Society]

Page 82: DEIR should more clearly define and discuss seasonal wetlands, high-marsh zones, transition and buffer areas. The discussion should reflect the importance and habitat value of seasonal wetlands, that high-marsh zones are marshes not transition areas, that transition areas are a rich and integral part of marsh ecosystems, and that buffer zones jointly function as transition habitats and are not valuable solely to buffer human impacts. [C3: League of Women Voters of the Bay Area]

Response: The discussion under "Wetlands of the Bayshore" is amended as follows:

The high salt marsh has been virtually eliminated throughout the San Francisco Bay. Where not otherwise diked, grazing has reduced this habitat to a band about three meters in width or less. Narrow as this band is, it plays a valuable role in the survival of bay wildlife, providing habitat for the salt marsh harvest mouse, the yellow throat, and the salt marsh song sparrow, among other species. High wetlands are needed also by many shorebirds for resting and protection from winter storms and waves.

Above the high salt marsh is the upland community, which may include grass, shrub or wooded habitats. In urban areas, these are generally disturbed habitats and are often referred to as "ruderal areas." Where the soil is suitable for plant growth, a variety of "weedy" species characterize this area, among them brome grasses, thistles, dock, mallows, poison hemlock and anise. When ruderal areas become seasonally flooded by rains, they provide wintering grounds for waterfowl and shorebirds. Upland area sprovide concealment and high tide refuge for a variety of marsh animals. It also provides roosts and protective cover for land birds and mammals. Uplands also serve as a buffer against disturbance of marsh wildlife by human activity. Between the high marsh zone and upland zone lies a transition area which contains elements of the high marsh vegetation as well as ruderal vegetation found in the upland zone.

Diked wetlands are common around San Francisco Bay. These areas, which once knew tidal action, vary in habitat value, depending on their location and the use for which they were originally diked (development, salt harvesting). While wildlife in these areas does not offer the diversity of tidal marshes, diked marshes often provide important habitat for some shorebirds and small mammals.

Page 86: Paragraph 3 is amended to include the following: The value of the diverse group of wetlands habitats found in the San Francisco Bay rgion is recognized in the policies of government agencies (including Fish and Wildlife Service and the California Dept. of Fish and Game), which require that a project results in no net loss of wetland acreage or habitat values. In-kind replacement of habitat must be accomplished by the creation of habitat of the same quality, preferablt in the vicinity of the proposed disturbance.

Page 84: The final document should include a complete list of threatened and endangered species potentially affected by the project as well as high priority candidates for listing [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Response: The EIR is amended to include Appendix B (this appears in Part III).

Page 85: Please consider the following rare and endangered species and sensitive habitats in final EIR: S.F. Garter Snake (possible alignment between Millbrae and San Bruno Avenues and fronting San Bruno Canal). These areas provide habitat to one of the largest populations of garter snakes in San Mateo County. This habitat extends from the marshy area along Millbrae, all the way to San Bruno Creek. Black Rail Bird; along Seal Cover Slough in Redwood Shores area of Redwood City; On the southern side of the slough is the habitat and nesting ground for the Black Rail Bird. [B8: San Mateo County, Dept, of Environmental Management]

Response: The proposed for the Bay Trail alignment between Millbrae and San Bruno uses the Southern Pacific Railroad right-of-way, which has not been determined to be garter snake habitat. Limited trails currently exist along San Bruno Canal; CEQA review at the project level will require that the issue of endangered species be examined. Relocation of the final trail alignment to on-street routes may be necessary to accommodate environmental concerns raised at that stage of project planning. Please refer also to the previous comment, in response to which the EIR has been amended to include Appendix B. Appendix B includes the San Francisco garter snake.

Section 8.2: Impacts

Estimate the total acreage of fish and wildlife habitat which might be directly or indirectly impacted. For unavoidable impacts, the final EIR should also include a description of mitigation measures and sites where new habitats will be created or enhanced to offset any habitat value losses. Include detailed revegetation plans as well as a monitoring scheme. [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Response: The DEIR notes that the policies of the Bay Trail Plan, as they relate to the selection of trail alignment, trail design, development and management, are designed to prevent the loss of valuable wetland habitat. Creation of new habitats or enhancement of existing habitats will not be required to offset habitat value losses, since the adherence to the policies will prevent habitat degradation. Implementing agencies may, however, explore opportunities for habitat enhancement in conjunction with implementation of Bay Trail segments where possible. CEQA provides that the depth of analysis in an EIR should correspond to the level of specificity of the project. Calculation of wetland acreage adjacent to the trail is not possible at this stage of program analysis, since precise alignments and design will not be determined until implementing projects are undertaken and evaluated. At that time, issues of what constitutes direct and indirect impact and at what distance an impact is deemed to occur should be addressed.

Page 86: Construction of the Bay Trail should not be used as an excuse to destroy riparian habitat, spray herbicides, cause soil erosion, muddy streams, or generally degrade natural areas [C6: Frank Delfino]

Response: Bay Trail Plan Policies, particularly policies 8, 20, 21, 22, 24 and 36, explicitly provide that the value of natural environments should be recognized and respected.

Page 86: EIR should recognize impact of wildlife disruption and decrease in bird use due to increased human activity on high-use trails. Unless there is a constant flow of people on a trail, any additional use will result in a corresponding decrease in bird use. [C2: Golden Gate Audubon Society]

Response: The nature and extent of wildlife disruption caused by human activity is a function of many factors, including level of trail use, nature of trail design, design and extent of buffer zone, seasons of permitted public access, and the nature of the habitat and varieties of wildlife using that habitat. The discussion in the EIR recognizes these variables.

Page 86: Loss of wetlands to to filling for the construction of bridges should be discussed. [C3: League of Women Voters of the Bay Area]

Page 86: *The statement that the Bay Trail alignment specifically avoids fill of wetlands should be deleted, since filling for levee widening and for stream and creek crossings ar both potentials. [C4: Marin Audubon Society]*

Page 86: Potential new fill should be identified as a project impact--include further filling for trail construction (levee improvements, erosion control measures and bridge construction. [C1: Environmental Forum of Marin]

Response: Potential fill for erosion control and levee maintenance is discussion under comments to DEIR Section 6. The intent of Bay Trail Policy 9 is to discourage bridging unless more serious impacts to wildlife habitat would occur without it. (These impacts will result whether or not a trail is developed, as increasing numbers of Bay Area residents make their way to the shoreline, trampling vegetation, creating undesignated trails and makeshift bridges to gain access to the Bay.) If, at the project implementation stage, bridging is considered, bridge design and placement should be done so as to minimize or avoid solid fill and disruption of vegetation.

Page 87: There should be a recommendation against the use of any biocides near wetlands habitats because of their potential impacts on water quality and habitat. [C1: Environmental Forum of Marin]

Page 87: Oppose all use of herbicides next to wetland areas [C2: Golden Gate Audubon Society]

Response: The EIR recommends that any proposed use of herbicides be asseseds for potential impacts at the project level. In addition, New Bay Trail Policy #36 has been added. It reads, "Local agencies should be sensitive to the natural environment not only in project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built."

Section 8.3: Mitigations

Comments regarding buffers:

Page 87: Specify the width and type of buffers which will be used. Avoid natural areas where space for a buffer will not be available or a buffer would not be appropriate [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Page 87: Provide for adequate transition/buffer areas around all wetlands to ensure protection of wetland resources [C3: League of Women Voters of the Bay Area]

Page 87: Buffers discussion does not recognize that buffers are also transition habitats.

Page 87: Buffer zones should be required around all trails that will receive increased usage as a result of the Trail. If a buffer zone is infeasible, then a physical buffer barrier (vegetation, fencing) should be created. Ideally, any buffer zone would incorporate view screens (such as vegetation) in addition to distance. Require that any new trails should be established no nearer than 175 feet to any wetlands. [C2: Golden Gate Audubon Society]

Page 87: Revise the mitigation section so that buffer/transition areas of substantial size (we recommend 100 foot) are recommended as mitigation for any new trail alignments near wetlands, and that wider areas be provided in undeveloped areas. Planting of native vegetation and fencing of transition area should also be recommended as mitigation measures along wetlands. [C1: Environmental Forum of Marin]

Page 87: Lack of relevant research does not license the Bay Trail Plan to dismiss the need to provide buffer zones. Future research may well confirm that buffer zones are crucial to the prevention of disruption of sensitive areas. Language in section 8.3 implies buffers are conceived of as more of a designed obstruction, such as a hedge or channel, rather than an intervening area of naturally occurring or planned and designed open space. The establishment of a generous transition zones is recognized to be among the most effective methods of protecting sensitive habitat and should be given primarily consideration. [C5: Save San Francisco Bay Association]

Response: Bay Trail Policy 8 recommends the provision of buffer/transition areas to protect wetland habitats. Policies do not, however, specify the nature and design of buffers. The determination as to the specifics--the need for a buffer/transition area, what type of buffer is appropriate (vegetation, fencing, combination) and the dimensions of the buffer and/or transition area--can only be made after an evaluation of the specific site, the type of trail proposed, and the nature of use restrictions which will be placed on the trail (e.g., trail closing during migratory seasons, nesting seasons) has been made. The nature of the natural resource, the variety of wildlife using the resource will strongly influence the size and design of the necessary buffer/transition zone. The lack of specificity of the Bay Trail Plan does not require a detailed description of buffer areas in this EIR.

Page 87: Recommend increased buffering around the trails (vegetation perhaps) or use of a metering system that would limit use during appropriate seasons (migratory and nesting), abridgement of trails (allowing entry only so far into a marsh, preserving some area from human activity), and closure of an existing wetland trail if too great a usage takes place. Establish a monitoring system so that such levels of use can be determined [C2: Golden Gate Audubon Society]

Response: Bay Trail policies specifically provide that local agencies have the authority to regulate the use of trails within their jurisdiction (Policy 33). This would pertain to such things as: restricting trail use to hiking only, limiting the number of users on a trail and limiting the times when a trail would be open (seasonally or daily restrictions), closing a trail altogether. The proposed Bay Trail alignment also provides for point access where a through trail may not be appropriate (e.g., an observation platform at Roberts Landing in San Leandro). Monitoring systems may be established as part of a management program for new or existing trails; this determination is within the authority of each implementing and managing agency. The Bay Trail Plan, however, having no regulatory authority, cannot dictate management practices for implementing agencies.

Page 87: Add as mitigation: Develop a mechanism that will enable immediate response by a local jurisdiction should it be discovered that damage or threats of damage to wetlands habitats (for example disturbance to seasonal nesting or foraging wildlife, or filling of wetlands due to construction) is occurring. To avoid impacts, this mechanism should enable immediate and long-term action to restrict access and/or to relocate a trail segment on either as short-term or long-term or seasonal basis. [C3: League of Women Voters of the Bay Area]

Response: This comment raises issues which are appropriately addressed at the individual project level, when the habitat value of natural areas can be evaluated and management responses determined. The suggested measures are beyond the scope of this project and suggest a level of detailed analysis that is inconsistent with the general nature of the Bay Trail Plan.

Page 87: Add mitigation: Avoid impacts by relocating the trail inland away from wetlands resources should be clearly stated as the preferred mitigation [C3: League of Women Voters of the Bay Area]

Response: Bay Trail Policies 3, 8, 22 and 24 clearly state that locating trail segments inland may be necessary in order to protect natural environments. This action is not necessarily the preferred alternative, however, as Policy 3 indicates. In some instances, buffering may not be necessary or appropriate. In other locations, trail design (including the provision of buffer/transition areas per Policy #8) can accomplish sensitive coexistence between the trail and natural areas.

Page 87: Inadequate discussion of seasonal wetlands and diked baylands; consultant with Fish & wildlife Service's National Wetland Inventory Maps before selecting final trail alignments to assure that seasonal and other wetlands are avoided. Use Recovery Plans for the endangered California clapper rails, sale marsh harvest mouse and California least tern [A1: U.S., Dept. of the Interior, Fish and Wildlife Service]

Page 87: To comply with CEQA and SB100 it is not sufficient to state that development of any new section will be subject to multi-jurisdictional review. The discussion should clearly identify all potential impacts to wetlands, including filling, loss of upland, transition area habitat, and increased disturbance to wildlife and their habitat. [C4: Marin Audubon Society]

Response: Trail alignments will not become "final" until specific projects are proposed and adopted by implementing agencies. At that time, the detailed review suggested in these comments will be appropriate to determine the location and design of the trail, use restrictions, and need for and design of buffer/transition areas. The general, programmatic nature of the Bay Trail Plan is evaluated here using the same general level of specificity, as required by CEQA.

Section 9: Air Quality

Section 9.3: Mitigations

Page 91: Reference to TSP should be changed to PM_{10}. [B7: San Francisco, Dept. of City Planning]

Response: Page 91, paragraph 4 is amended as follows: "...The Above-named measures would reduce $\underline{PM_{10}}$ emissions."

Section 12: Archaeological and Cultural Resources

Section 12.1: Setting

Page 97: Few remnants of basketry are found in archaeological sites; grass fibers break down and return to the earth [B6: Native American Heritage Commission]

Response: Page 97, paragraph 2, sentence 6 is amended to delete reference to baskets, "Mortars and other remnants of their material culture..."

Section 12.3: Impacts

Page 99: Last sentence of final paragraph is confusing, and 24-hour notification period seems too short.[B7: San Francisco, Dept. of City Planning]

Response: Page 99, final sentence of last paragraph is deleted.

Section 14: Unavoidable Significant Adverse Impacts

CEQA defines a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the physical conditions which existing in the area affected by the proposed project." (Section 15002, 15382). In addition, the CEQA guidelines (Appendix G) identifies examples which illustrate significant effects.

Section 14 is amended to read, "Environmental analysis prepared for the Bay Trail Plan and presented in this environmental impact report concludes that the implementation of the Plan will generate no significant environmental impacts. The Bay Trail Plan creates a general framework for action to implement a regional recreational trail. Because site-specific, project-level planning must be undertaken in order to implement the trail, impacts of specific trail segment development and use may be revealed at that, more detailed stage of review and analysis. Suggested mitigations for a variety of potential impacts are included in this document as a guide for future action. Additional mitigations may be necessary and should be reviewed at the project planning stage.

Section 16: Alternatives

Section 16, page 102 is amended to include the following discussion:

Environmentally Superior Alternative

This environmental analysis concludes that the project as set forth in the Bay Trail Plan is the environmentally superior alternative. The shoreline-only alterternative would involve significant amounts of fill and habitat degradation, as trails which are proposed to be located inland in the proposed Bay Trail Plan are relocated to shoreline locations. The No Project and the Use of Existing Roads Alternatives would both result in continued disturbance of shoreline habitat, due to the expected continuing desire of a growing Bay Area population to reach the bayshore. In addition to degradation from the proliferation of undesignated trails, local action would necessarily be disjointed and uncoordinated. No broad policy framework would be available as a region-wide policy guide for shoreline access.

Cumulative Impacts

Cumulative impacts should be addressed in a separate section [C1: Environmental Forum of Marin]

No cumulative impact analysis [C2: Golden Gate Audubon Society]

Discussion of the cumulative impacts of the trail should be included [C3: League of Women Voters of the Bay Area]

Response: Add new section after Section 16 (Alternatives Analysis) as follows:

Implementation of the Bay Trail Plan will increase the amount of public access along the San Francisco Bay shoreline. It will also increase the number of on-road bicycling routes available to commute and recreational cyclists. Trail users enjoying the Bay Trail will add to the growing population of outdoor enthusiasts which are taking advantage of ever-increasing opportunities for recreational activities along the shoreline, the sources of which include: implementation of local agency recreational facilities (parks and trails) along San Francisco Bay, development approvals which are conditioned with public access requirements through the regulatory authority of the S.F. Bay Conservation and Development Commission, and the recent policy decisions by the U.S. Department of Interior, Fish and Wildlife Service to expand public access in selected Wildlife Refuges as part of its Wildlands Program.

As public access in natural areas is increased, less undisturbed acreage is available for wildlife use alone. This trend is offset by the advantages which are possible from coordinated access programs using policies such as those proposed in the Bay Trail Plan. Opportunities are created for management of open space areas, restricting access during peak seasons for wildlife use. Public education can increase public support for programs to protect valuable habitat areas.

Part III

Table 1-1, as amended to incorporate comments and revised Bay Trail Policies

Table 1-2, as amended to incorporate comments

Appendix B

Proposed Bay Trail Alignments, as amended

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy		Impacts by Categories	Recommended Mitigation[1]
Trail Alignment Policies			
1	Ensure a feasible, continuous trail around the Bay.	None.	
2	Minimize impacts on and conflicts with sensitive environments.	None.	• Apply policies 5, 8, 9, 14, 15, 17, 20 - 25.
3	Locate trail, where feasible, close to the shoreline.	**Vegetation and Wildlife:** Could place alignment near or through sensitive natural environments.	• Apply Policies 20, 22 and 24.
4	Provide a wide variety of views along the Bay and recognize exceptional landscapes.	**Vegetation and Wildlife:** Could place alignment near or through sensitive natural environments.	• Apply Policies 20, 22 and 24.
5	Investigate water trails as an enhancement to the trail system where necessary or appropriate.	**Land Use:** May increase demand for berths or docking facilities at marinas.	• If water trails are advocated, publicize water trail access where there is existing capacity to serve projected need. • Analyze need for facility expansion at project level.
6	In selecting a route for the trail, incorporate local agency alignments where shoreline trail routes have been approved. Incorporate San Francisco Bay Conservation and Development Commission public access trails where they have been required.	**Land Use:** May increase use of existing trails beyond design capacity.	• See Table 1-2, Land Use.
7	Where feasible and consistent with other policies of this plan, new trails may be routed along existing levees.	**Geology and Soils:** May increase erosion and sediment potential; Creates need to identify alternate trail routes during levee/channel maintenance.	• Coordinate design of new trails along existing levees with the operations division of the organization responsible for the levees. Investigate alternative trail surface materials, riprap levees, revegetate exposed surfaces. • Identify need for and location of alternate trail routes at project implementation stage. • Erosion protection measures should include provisions for marsh revegetation where feasible.
8	Where existing trails through wetlands are well-maintained and well-managed, the Bay Trail can feasibly be routed there. In these cases, trails should be used according to current regulations. Alternate routes should be provided where necessary and additional buffering/transition areas designed to protect wetland habitats should be provided where appropriate.	**Vegetation and Wildlife:** Abandoned levees can be nesting habitat for Snowy Plover, Kildeer, Sand Piper, Burrowing Owls. **Geology and Soils / Vegetation and Wildlife:** Additional use of existing wetland trails may increase erosion, sedimentation and impacts on wildlife.	• Avoid disturbance of nesting sites. • Use erosion and sedimentation mitigations as cited above. • Policies provide for alternative alignment and buffers to protect wildlife.

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy		Impacts by Categories	Recommended Mitigation[1]
Trail Alignment Policies, cont'd			
9	In selecting a trail alignment, use existing stream, creek, slough and river crossings where they are available. This may require bridge widenings in some locations. In selecting trail alignments, new stream, creek and slough crossings should be discouraged. Where necessary because acceptable alternatives do not exist, bridging may be considered.	**Geology and Soils / Hydrology and Flooding:** Development of trail will require new footbridges. Bridges may conflict with channel maintenance, may be subject to flood hazards and would require additional expenditures. **Vegetation and Wildlife:** Use of existing bridges to avoid construction of new ones may result in loss of riparian vegetation where new paths are established along streams to reach existing bridges.	• Policy encourages use of existing bridges. • Bridge design (height, method of support) should mitigate conflicts and flood hazards. • Analyze comparative effects case by case; consider new footbridge crossings if using existing ones would result in a greater loss of riparian vegetation. Bridge design and construction should minimize impacts on affected vegetation and habitat. Appropriate mitigations should be evaluated at the project level.
9a	In order to minimize the use of existing staging areas along the shoreline and to reduce the need for additional staging areas, the choice of trail alignment should take full advantage of available transit, including rail service (e.g., Caltrain, BART), ferries and bus service.	None.	
9b	Connections to other local and regional trail and bikeway systems should be actively sought in order to provide alternatives to automobile access to the Bay Trail. In particular, opportunities should be explored for trail connections to the Bay Area Ridge Trail, which is envisioned to circle the Bay along the region's ridgelines.	None.	

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy	Impacts by Categories	Recommended Mitigation[1]
Trail Design Policies		
10 Provide access wherever feasible to the greatest range of trail users on each segment.	**Geology and Soils:** Additional grading will be required in some areas to maintain wheelchair accessibility.	• Apply design guidelines and Policy 9.
10a Wherever possible, new trails should be physically separated from streets and roadways to ensure the safety of trail users.		
11 Create a trail that is as wide as necessary to accommodate safely the intended use, with separate alignments, where feasible, to provide alternative experiences.	**Land Use:** Could require more acreage than one single route.	• Where alternate alignments are recommended, trail would generally be located on existing rights-of-way and levees.
12 Highlight the interpretive potential of certain trail segments, including opportunities for interpretation, education, rest and view enjoyment.	**Land Use:** Promotes use of and demand for open space.	• Apply Policies 8 and 17.
13 Incorporate necessary support facilities, using existing parks, parking lots, and other staging areas wherever possible.	**Land Use:** May increase demand for expansion of existing facilities where capacity is exceeded.	• Analyze need for capacity expansion at project level. • See Table 1-2, Traffic and Circulation.
14 Design new segments of trail to meet the highest practical standards and regulations, depending on the nature and intensity of anticipated use, terrain, existing regulations, and standards on existing portions of the trail.	None.	
15 Minimum and maximum standards by use, width, surface, etc. should be developed, to ensure safe enjoyment of the trail and compatibility with surroundings and existing facilities, and to encourage use and design of surfaces for which long-term maintenance will be cost-effective. (See attached trail design guidelines, at end of this table.)	None.	

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy		Impacts by Categories	Recommended Mitigation[1]
Trail Design Policies, cont'd			
16	A consistent signing program should be established throughout the trail system, using a Bay Trail logo which will identify trails within the Bay Trail system as distinct from other connecting trails. The choice of materials used should be the concern of the individual implementing jurisdictions and agencies.	None--Clear signing will help to keep undesignated trails, which would impact privacy and cause erosion, from forming.	
16a	The Bay Trail signing program may include necessary cautionary and regulatory signing, including warnings of seasonal trail closings and other restrictions on trail use. Interpretive signing may be provided to help educate trail users about the surrounding environment and the importance of observing trail use restrictions and staying on designated trails.	None.	
17	Design and route the trail to discourage use of undesignated trails.	None--Protects wildlife and habitat values.	
18	Domestic pets should be prohibited on new trails if the managing agency determines that their presence would conflict with habitat values or other recrational users. This prohibition is not intended to apply to service animals such as guide dogs.	None--Protects wildlife and habitat values; reduces hazards for bicyclists.	
19	The trailhead signing program should include information which will enhance the Bay Trail experience. This may include a description of the length and relative difficulty of the trail as a guide for trail users with mobility limitations, available support facilities, available access to other connecting trails, and a description of the habitat resource which emphasizes interpretive information as well as the need to observe posted trail use restrictions.	**Land Use:** May cause a minor increase in the intensity of use in certain trail segments.	• None required.

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy		Impacts by Categories	Recommended Mitigation[1]
Environmental Protection Policies			
20	The Advisory Committee is aware of the ecological value of wetlands; in many cases, they provide habitat for a variety of endangered species. In the San Francisco Bay Area, these areas serve as a vital link in the Pacific flyway for feeding, breeding, nesting and cover for migratory birds. To avoid impacts in wetland habitats, the Bay Trail should not require fill in wetlands, and should be designed so that use of the trail avoids adverse impacts on wetland habitats.	None--Protects wetland habitats from diverse impacts.	
20a	Future support facilities serving the Bay Trail should be designed and constructed in such a manner that they do not impact fish and wildlife resources, especially wetlands. These facilities should be located and designed in a way that no fill of wetlands will be required.	None--Protects wetland habitats.	
21	The Bay Trail as envisioned in theis Plan is not defined as a continuous asphalt loop at the Bay's edge, but as a system of interconnecting trails, the nature of which will vary according to the locale and the nature of the terrain and resouces in the vicinity of each particular trail segment.	None.	
22	The path will not always follow the bay shoreline; inland reaches may be more appropriate, especially for bicycle travel, in some parts of the bay region.	**Traffic and Circulation:** May create safety hazards and traffic conflicts.	• Analyzed in Table 1-2, Traffic and Circulation.
		Land Use: May create compatibility issues: privacy, noise, and crime concerns.	• Analyzed in Table 1-2, Land Use.
23	The path should be designed to accommodate different modes of travel (such as bicycling and hiking) and differing intensities of use, possibly requiring different trail alignments for each mode of travel, in order to avoid overly intensive use of sensitive areas.	**Land Use:** Multiple trails would increase construction-related impacts and require more acreage than one single route.	• Trail would be largely located on existing rights-of-way and levees.

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy	Impacts by Categories	Recommended Mitigation[1]
Environmental Protection Policies, cont'd		
24 Where the alignment of the Bay Trail may more appropriately be located away from the shoreline, in order to protect particularly sensitive habitats, access to shoreline areas may be possible by connecting the Bay Trail to existing loop trails and other interpretive facilities. These access points should be planned and designed to make clear the distinction between the continuous Bay Trail and the interpretive trail. (These may include different trail surfaces, marked entry points to interpretive areas, expanded facilities for education and shoreline interpretation, signage, regulation and enforcement of regulations.)	None--Serves to protect sensitive environments.	
25 Provision of land or funds for Bay Trail planning or construction shall not be considered mitigation for wetland losses.	None.	
Transportation Access Policies		
26 Bridges and roads will be important connections in the Bay Trail system, providing not only commute routes, but enhancing the recreational use of the trail by creating trail loops which will allow a greater number of people to enjoy the trail.	**Traffic and Circulation:** May increase demand for access across bridges which do not currently have bicycle and pedestrian access. **Socioeconomic:** Would potentially have an economic impact on budgetary allocations for transportation improvements.	• Develop access program for each bridge reflecting constraints and opportunities. • Apply Policy 27, 28, 29.
27 In the short term, attention should be focused on improving safe access to the bridges, possible expansion of bicycle shuttle services and public transit accommodations of bicycles to allow cross-bay access.	**Socioeconomic:** Would potentially have an economic impact on budgetary allocations for transportation systems and services.	• Develop short-term solutions to providing bridge access.
28 In the long term, unconstrained access on bridge structures is preferred. This can more easily be accomplished in planning future facilities, as long as public access is a requirement for new structures. Legislative action which would require bicycle and pedestrian access on new facilities should be actively sought.	**Socioeconomic:** May increase demand to fund design solutions to provide access across new bridges. **Socioeconomic:** May increase pressure for legislative action; may divert funds from other trail projects	• None required. • None required.

Bay Trail Plan Policies
Summary of Impacts and Mitigations

Bay Trail Policy		Impacts by Categories	Recommended Mitigation[1]
Transportation Access Policies, cont'd			
29	Opportunities for cooperative funding of pedestrian and bicycle accessways should be investigated in order to make financing feasible.	**Socioeconomic:** May increase pressure for legislative action; may divert funds from other trail projects.	• Encourages funding options for trail construction.
29a	Access to the trail by all forms of public transit should be strongly encouraged. Opportunities for reaching the trail by public transit shoud be highlighted on trail maps and promotional materials.	None.	
Trail Implementation Policies			
29b	An ongoing Bay Trail Project should be established to implement the Bay Trail Plan. The Project should be jointly sponsored by a wide range of organizations and agencies committed to realizing the vision of a Bay Trail.	None.	
29c	The Bay Trail Committee, technical committee and outreach program should be established as described in section IV of the Bay Trail Plan.	None.	
30a	"Friends of the Bay Trail" should be established to provide widespread oppportunities for the active involvement of individuals and organizations throughout the Bay Area to promote the Bay Trail.	None.	
30a	ABAG's Executive Board should continue Bay Trail program oversight, by reviewing monitoring reports prepared by the Bay Trail Committee.	None.	
31	The Bay Trail Committee should continue to explore the establishment of a management authority to coordinate maintenance, patrolling and liability functions for the portions of the Bay Trail.	None.	
32	Local governments and other implementing agencies should be strongly encouraged to amend relevant planning and policy documents (General Plans, specific plans, zoning ordinances) to incorporate appropriate references to the Bay Trail.	None.	

Bay Trail Plan Policies
Summary of Impacts and Mitigations

	Bay Trail Policy	Impacts by Categories	Recommended Mitigation[1]
33	The Bay Trail Plan recognizes the authority of managing agencies to set policy regarding the use of trails within their jurisdiction.	None.	
34	Since the passage of the McAteer-Petris Act in 1965 and adoption of the S.F. Bay Plan, significant trail access to and along San Francisco Bay has been obtained for residents of the Bay Area by the San Francisco Bay Conservation and Development Commission. The Bay Trail Plan recognizes that BCDC has accomplished this without greatly interfering with wildlife values and property rights, and strongly recommends that the Commission's public access efforts be continued.	None.	
35	In constructing the trail and implementing signing programs, agencies should be encouraged to utilize non-profit organizations (e.g., the California Conservation Corps, the East Bay Conservation Corps, the Marin Conservation Corps, the San Francisco Conservation Corps and the Trail Center).	None.	
36	Local agencies should be sensitive to the natural environment not only in project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built.	None.	
37	Agencies should be encouraged to take advantage of the wide variety of available trail financing and implementation techniques identified in the Bay Trail Plan as they undertake implementation of Bay Trail segments in their jurisdiction.	None.	
38	The Bay Trail Committee should assist local agencies in identifying and securing funding for Bay Trail implementation.	None.	

Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Land Use	1. There would be potential conflict between trail use and wildlife activity.	• See Vegetation and Wildlife.
	2 Trail congestion in shoreline parks could burden restroom and parking facilities and interfere with other recreational uses of the parks.	• Potential facilities' related impacts at particular parks should be addressed at the project level and assessment made for sites where parking lot and restroom capacity may need to be expanded. • Negotiate agreements for joint use of private parking lots near the trail for use as staging areas.
	3. Existing hunting activity permitted in the wetlands of the San Francisco and San Pablo Bay (including the San Francisco Bay National Wildlife Refuge) during the winter months may create a potential safety risk for trail users.	• The trail should be routed along existing in-board levees. • The zone of permitted hunting should also be reviewed to ensure a sufficient buffer between trail users and hunters and to prevent conflicts betweeen these wetland user groups. • Consider closing certain trails during hunting season.
	4. Impacts in residential areas include potential loss of homeowner privacy, increased neighborhood noise and the concerns for increased crime, including vandalism and burglary. (Potential noise and crime effects would be insignificant, based on studies of other urban trails.)	• To minimize privacy and noise impacts on adjoining residential areas, new class I trail segments should be constructed with an adequate buffer strip. Screen plantings and fencing are also recommended whenever there are existing or planned residences immediately adjacent to the trail. Where feasible, 50' would be a desirable minimum easement width for new class I segments of the trail.
	5. New class I trails may introduce access near commercial/industrial areas which could impair security, particularly where buildings are oriented away from the trail and surveillance of trail activities is limited.	• Buffer zones should be established where needed in class I sections of the trail. Property owners/businesses may increase security through installation of fencing or thorny barrier plants, restricting property access and/or orienting access away from the trail, and arranging clear visibility of activities on the trail and of site and building access points.
	6. Presence of explosive and/or toxic materials in industrial or institutional facilities may pose a safety hazard and inhibit the trail's development in their immediate vicinity.	• Buffer zones and fencing should be established where warranted. These measures can be supplemented by warning signage and lighting.
	7. The operation of heavy equipment and truck activity in industrial areas could endanger the safety of bicyclists and pedestrians.	• Specifics of potential conflicts should be reviewed by a traffic engineer for appropriate mitigation. Mitigation measures could include warning signage, reduction of truck speed, installation of rumble strips on blind curves, restriction of truck traffic to local destinations, road widening to accommodate a class II facility, creation of class I trails or realignment of the trail.

[1] Impact Categories refer to the EIR chapter headings and appear in the same order as the sections.
[2] Positive or beneficial impacts of the trail are depicted in *italics*.

Table 1-2

Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Land Use, cont'd	8. The potential for litter problems would be greatest in areas of rest and congregation (e.g., staging areas, parks, BCDC shoreline access, picnic areas).	• Policy 13 recommends use of existing staging areas to encourage congregation where facilities are available. • The draft Bay Trail Plan proposes no new picnic or staging areas. • The effects of littering can be minimized through: 1) trash containers placed at convenient locations; 2) appropriate signage; and 3) volunteer or contract labor to periodically pick up litter.
	9. The increased activity on existing trail segments may lead to overuse. Some sections of trail may receive more traffic than existing design would safely accommodate.	• Overuse may require trail redesign for site-specific response. Mitigations could include: trail improvements (striping, widening, signage), construction of an additional trail to separate user groups, and realignment of the trail to bypass congested areas.
	10. Changing land uses and development patterns in the vicinity of the trail could require trail realignment or design changes.	• City and County general plans should be amended to include the Bay Trail, so that the alignment can be considered in local land use planning.
	11. Cities and counties around the Bay may not currently have a designated bay shoreline trail in their bikeway/trails masterplans or parks and recreation elements.	• City and County general plans should be amended to include the Bay Trail, so that the alignment can be considered in local land use planning.
	12. *New class I trail segments would generally be compatible in residential areas as linear parks, provided there is sufficient right-of-way to offer a buffer for the residences adjacent the trail. If the trail is well-integrated into a residential area, it could become an amenity, increasing residents' recreational opportunities, improving their access to parks connected by the trail, and enhancing the overall quality of the local environment.*	• None required.
	13. *In retail or neighborhood commercial areas, the trail may benefit local commerce by providing an additional source of customers for selected retail activities.*	• None required.
	14. *Where the trail is proximate to employment centers, it can fill previously-unmet recreational needs of workers.*	• None required.
	15. Trails on abandoned railroad rights-of-way through agricultural areas may cause litter problems, increased fire hazard and potential livestock disruption.	• In agricultural areas, new trails along railroad rights-of-way should be fenced to preclude unauthorized access and disturbance of livestock. Warning signs should be installed to advise trail users to stay on the trail. Staging facilities, which encourage picnicking or congregating, should not be located in these areas. Agreements for managing the trail should stress appropriate levlels of patrolling on these segments.

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Table 1-2

Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Housing and Economic Development	1. Noise and loss of privacy may negatively impact residences immediately adjacent to the trail.	• Details of the project design (distance between the trail and development, fencing, landscaping, use of natural topography) can buffer noise and privacy impacts.
	2. Trail development has the potential to increase crime in residential and commercial areas.	• See Land Use mitigation #5.
	3. Trail users' need for parking near the trail could impact adjacent residential and commercial areas.	• See Traffic and Circulation mitigation #1.
	4. *The trail may increase the value of near-by residences.*	• None required.
	5. *The trail may be used for local trips and commuting, reducing the overall increase of traffic associated with the trail.*	• None required.
	6. *Development of class I or II bicycle paths may provide greater safety from vehicles than the current use of public streets.*	• None required.
	7. *Trail may provide an additional source of customers for retail activities along the trail route.*	• None required.
	8. *The Plan furthers many cities' goals for waterfront development.*	• None required.
Traffic and Circulation	1. In the long term, trail users' traffic to staging areas could exceed the current parking and circulation system capacity. Overflow parking and street congestion in the vicinity may result.	• Publicize transit connections, where they exist, to provide alternative access to the trail. • Negotiate joint use of private parking near the trail for additional staging areas. • Conduct periodic review of traffic conditions at staging areas; New staging areas should be added as needed, impacted staging areas should be discontinued as official trail staging locations, and designated staging areas should be well advertised.
	2. Neighborhoods which have easy access to the trail could become unofficial staging areas, creating the potential for impacted neighborhood parking, crime, and soil erosion from use of undesignated trails.	• Policy 17 recommends designing and routing the trail to discourage use of undesignated trails. Barriers should be established to discourage use of undesignated trail access points.

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Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Traffic and Circulation, cont'd	3. Trail construction may divert and/or slow traffic.	• Trail construction that would impact the flow of traffic should be limited to non-commute hours.
	4. Possible loss of curb parking associated with class II bicycle facility construction could create impacted parking on adjacent streets.	• Where removal of curb parking is necessary to install class II bicycle lanes, the increased safety afforded bicyclists by removing curb parking needs to be weighed on a project-specific basis against the impact of increasing the demand for parking elsewhere. • Consider alternatives to removal of curb parking. These include road widening to accommodate a class II bicycle lane or establishing a class III bicycle route.
	5. There are potential alignment conflicts with highway widenings, interchange improvements and other subregional transportation projects.	• Highway/trail aligment conflict should be resolved through project design. Where design solution is not possible, trail may need to be realigned. Implementing agencies should consult with Caltrans early in the project planning phase where conflicts between proposed trail alignents and Caltrans facilities may occur.
	6. There is the potential for hazardous conflict between bicyclists and vehicles on public streets.	• Class I trails are preferred for safety from vehicle conflicts where economically and physically feasible.
	7. Bicyclists who do not observe rules of the road may create hazards to drivers as well as to themselves.	• Increased law enforcement may be required at locations where patterned violation occurs.
	8. Truck traffic presents a higher potential for conflict with bicyclists using the same street.	• Specifics of potential conflicts should be reviewed by a traffic engineer for appropriate mitigation. Mitigation measures could include warning signage, reduction of truck speed, installation of rumble strips on blind curves, restriction of truck traffic to local destinations, road widening to accommodate a class II lane safely, creation of a class I trail or realignment of the trail.
	9. There is a potential for trail user/train conflict where the trail parallels an active railroad line.	• Project level design should consider the following: fencing, cautionary signing; wide buffers between the trail and rail line; keeping the trail surface well maintained and attractive to use; aligning the trail, access, parking and support facilities on one side of the tracks with a barrier to the rail line.
	10. The Plan will create a public policy to provide trail access across vehicle bridges.	• Bridge access may be achieved through the retrofitting of existing bridges to accommodate class I trails, providing shuttle service, equipping buses to carry bicycles, allowing bicycles on road shoulders and requiring trail access on new bridges. Implementing agencies should work with CalTrans to define and carry out effective solutions.

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Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Traffic and Circulation, cont'd	11. Development of the trail could increase the demand for public transit to accommodate bicycles.	• Transit agencies should be encouraged to evaluate alternatives and retrofit selected buses with bicycle carrying equipment.
	12. Trail users may demand increased transit to the trail, especially on weekends and holidays.	• Transit service may be improved through route restructuring, better transit connections, and schedule trade-offs.
	13. A portion of the traffic to the trail can be expected to be captured from other subregional recreational destinations. Location-specific impacts and appropriate mitigations need to be addressed at the project level.	• None required.
	14. On high traffic volume streets, bicyclists may be inclined to avoid the segment altogether or to divert off the trail to more traffic-free streets.	• Apply Policy 10a.
	15. *The proximity of the trail to ferry terminals and marinas may increase ferry ridership and use of ferries as water trails.*	• None required.
	16. *Trail access and departure by transit at different locations would allow a non-looping excursion and thereby enhance the trail experience.*	• None required.
	17. *Transit service to the trail would provide access to a wider group of trail users than without such service.*	• None required.
	18. *Public transit to the trail would lessen the potential air pollution, traffic and parking congestion impacts associated with vehicle access alone.*	• None required.
Hydrology and Flooding	1. Construction of the trail could impact local drainage.	• Flood control districts and local public works departments should review trail drainage plans at the project level for adequacy.
	2. There is a potential for degraded water quality from sedimentation and litter decomposition.	• Employ site-specific erosion control techniques, curb littering with convenient trash receptacles and install signing to discourage littering and keep people on the trail. Erosion control could include dry weather construction, trapping sediment, minimized grading area and revegetation.
	3. Flood control district operations, particularly channel clearing, could be harmful to the trail over and along creeks.	• At the project design phase, assess alternative trail surfaces, alignments and trail designs for compatibility with flood control operations.

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Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Hydrology and Flooding, cont'd	4. If asphalt surfaces were developed atop levees that will need to be raised or repaired, the asphalt trail surface would have to be removed before the levee could be raise.	• Policy 21 requires trail design to be appropriate to terrain. Alternative trail surfaces should be investigated, including simple grading, compacted gravel, and prefabricated boardwalk sections that can be disassembled and removed for levee work.
	5. Flooding of the trail has the potential to damage the trail, particularly sections of asphalt construction.	• Trail segments which cannot be protected from recurrent flooding should be considered for permeable trail surface materials to minimize damage.
	6. The trail's alignment on flood plains, over and along streams and flood control channels, and near bay tides can pose a safety hazard to trail users.	• Potentially hazardous trail alignments could require realignment, or be mitigated by raising the trail above the 100-year flood elevation, installing safety barriers, or development of a program to close the trail during hazardous periods. Safety barriers, if installed, must be designed so as not to block flood flows.
Geology and Soils	1. As grades increase beyond 2 percent, use of the trail will be increasingly constrained for trail users with mobility limitations. The steepness of the trail and length of grade could be significant factors in determining the distribution of trail users on the trail.	• The Plan's design guidelines propose a maximum of 5 percent grade over short distances to accommodate the widest possible range of trail users. • Policy 19 recommends that the trailhead signing program include information describing the relative difficulty of the trail.
	2. The trail may be subject to a wide variety of geophysical hazards: soil settlement, expansive soils, earthquake, liquefaction, and landslide.	• CalTrans bikeway structural section standards are recommended as the minimum standards for an asphalt trail that will meet a variety of geophysical stresses and hazards. To increase resiliance to stresses 5-1/2 to 6 percent asphalt content, good maintenance, slurry seal and increased thicknesses of base and surface, as necessary, are recommended.
	3. Expansive soils would subject a trail surface to seasonal movement and stress.	• A cement treated trail base can mitigate the damage caused by extremely expansive soils.
	4. Landslides may cover the trail, remove it, or undercut the trail.	• Damage from landslides can be limited by protective retaining walls and debris fences, filter fabric or gunite on cut slopes, maximizing the distance between the trail and landslide hazards, and other techniques as recommended by a soils engineer.
	5. Levees made from wet sludge can be expected to be closed for trail use for up to two years after filling before the material dries suficiently for trail grading.	• At the time of project implementation, alternative routes should be determined for segments that can be expected to have extended periods of closure.
	6. There would be potential erosion and sedimentation from trail construction, road widening and shoulder paving.	

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Table 1-2

Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Vegetation and Wildlife	1. Development and use of a trail has the potential to impact the ecological equilibrium through soil erosion, sedimentation, removal of riparian vegetation, and use of chemicals.	• The Plan includes policies to protect sensitive environments from degradation during trail construction, use and management. The trail alignment does not propose any new solid fill in known marshlands. For soil erosion and sediment mitigations see Hydrology and Flooding. Site specific environmental review will be required at the time of project implementation. • Apply Policy 36. • Trail construction and maintenance should be timed to avoid nesting season and other times that are important to wildlife use. • Existing levee trails should be maintained, but not upgraded, if upgrading would result in significant disturbance to wildlife and their habitat.
	2. Trail alignment and use could impact wildlife through degradation or loss of habitat, predation, and disturbance by humans.	• Buffers to view of and sound from trail users may be the most effective wildflife protection from disturbance. Design of buffers may include fencing, native vegetation, or physical distance separating the trail from wildlife habitats. The specific design must be determined after site-specific review and evaluation of alternatives. • The Plan proposes a policy to prohibit domestic animals from the trail (consistent with local regulations). • Signs advising users to stay on the trail, policing, docent and education programs should be investigated to encourage proper trail use. • Site-specific wildlife impacts should be reviewed at the time of project implementation. • Apply policies 16a, 19, 20, and 20a. • Trail segments which experience levels of use beyond their capacity of which use creates significant impacts to wetland habitats should be evaluated for use restrictions, redesign or relocation.
	3. *The Plan may improve the public's knowledge and appreciation of the Bay's resources, in turn motivating public support for bay and wildlife conservation.*	• None required.

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Table 1-2

Proposed Bay Trail Alignment
Summary of Impacts and Mitigations

Impact Category [1]	Impacts [2]	Recommended Mitigations
Air Quality	1. Construction vehicles and equipment, and worker commute vehicles would emit exhaust and generate dust at the sites. Given the small number of vehicles to be involved in trail segment construction at a given time and the relatively short segments of trail to be built over the multi-year implementation period, both the local and the regional impacts of these emissions would be negligible.	• Where the trail would be constructed as a class I path during the dry season, unpaved construction sites should be sprinkled with water twice daily. Disturbance of soil should be minimized. Stockpiles of dirt or sand should be covered. Any trucks on the construction site hauling soil, sand or debris should be kept covered.
	2. Vehicles driving to and from the staging areas would be a contributing source of air pollutants.	• Construction equipment engines should not be kept idling when they are not being operated and should receive periodic maintenance.
		• Additional emissions would be somewhat offset by bicyclists using the trail system as an alternate transportation route, particularly those who are commuting or using it for other non-recreational purposes. See also Traffic and Circulation for additional measures.
Noise	1. Daylight noise levels would increase in residential areas of the trail, particularly on weekends and holidays. These increases would be intermittent only, but may be annoying for adjacent residents.	• An appropriate buffer strip should separate new class I segments of the trail from residential neighborhoods. Suggested buffer width is 20 feet. Vegetative screening should also be planted where needed. Wherever the trail passes close to residential areas, signs should be posted to request users to respect the privacy of adjacent residents.
	2. The trail alignment would generate increase human activity and noise from vehicles at staging areas and at other points of congregation like picnic areas and restrooms. Unlike the trail alignment, these would represent relatively stationary noise sources.	• No new staging areas are proposed in the Plan. When additional staging areas are proposed in the future, noise impacts will be evaluated during project environmental review.
	3. Human voices may have a disturbing influcence on the feeding and nesting habits of some waterfowl and shorebirds in coastal marshes.	• Where wetland areas are crossed by existing levees and trails, signs should be periodically posted requesting that people pass quietly to avoid disturbing the wildlife. See also Vegetation and Wildlife.
Public Services and Utilities	1. Adoption of the Bay Trail Plan will not increase the need for public services or utilities. Development of the trail is likely to attract new users to existing trails and facilities and may create service and utility needs in excess of existing supply. The local trail development/ maintenance agency may have to allocate increased financial support to meet ublic service needs.	• None required now. Specific facility upgrading requirements should be reviewed at the project-level phase and be expanded as needed.
Cultural Resources	1. Potential archaeological sites may be located at relatively undisturbed bayshore areas and along streams that are part of the trail system. Potential archaeological sites would be primarily related to middens, burial, camp and village sites.	• Cultural resource sites should be identified at the project level. Whenever such sites are anticipated, the lead agency staff should require a field reconnaissance by a qualified archaelogist. If cultural resources are encountered, on-site preservation is advocated to avoid destruction.

[1]Impact Categories refer to the EIR chapter headings and appear in the same order as the sections.
[2]Positive or beneficial impacts of the trail are depicted in *italics*.

Appendix B

Listed endangered and threatened species and candidate species that may occur in the area of the proposed Bay Trail, San Francisco Bay Area. Source: U.S., Fish and Wildlife Service, 3/30/89.

Listed Species

Birds

American peregrine falcon, *Falco peregrinus anatum* (E)
California least term, *Sterna antillarum browni* (E)
California clapper rail, *Rallus longirostris obsoletus* (E)
California brown pelican, *Pelecanus occidentialis californicus* (E)

Reptiles

San Francisco garter snake, *Thamnophis sirtalis tetrataenia* (E)

Mammals

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Invertebrates

California freshwater shrimp, *Syncaris pacifica* (E)
mission blue butterfly, *Plebejus icaroides missionensis* (E)
San Bruno elfin bitterly, *Callophrys mossii bayensis* (E)

Candidate Species

Birds

western snowy plover, Charadrius alexandrinus nivosus (2)
saltmarsh common yellowthroat, Geothlypis trichas sinuosa (2)

Mammals

salt marsh vagrant shrew, Sorex vagrans halicoetes (1)
Suisun ornate shrew, Sorex ornatus sinuosus (2)

Invertebrates

San Francisco fork-tailed damselfly, *Ischnura gemina* (2)
Callippe silverspot butterfly, *Speyeria callippe callippe* (2)
Tiburon blind harvestman, *Sitalcina tiburona* (2R)

Plants

Alameda manzanita, *Arctostaphylos pallida* (2)
swamp sandwort, *Arenaria paludicola* (2)
Suisun aster, *Aster chilensis* var. *lentus* (2)
Tiburon paintbrush, *Castilleja neglecta* (1)
north coast bird's-beak, *Cordylanthus maritimus* subsp. *palustris* (2)
soft bird's-beak, *Cordylanthus mollis* subsp. *mollis* (1)
Baker's larkspur, *Delphinium bakeri* (2)
San Francisco bumplant, *Grindelia maritima* (2)
Tiburon tarweed, *Hemizonia multicaulis* subsp. *vernalis* (2)
Marin dwarf-flax, *Hesperolinon congestum* (1)
Santa Cruz tarweed, *Holocarpha macradenia* (1)
delta tule-pea, *Lathyrus jepsonii* subsp. *jepsonii* (2)
Mason's lilaeopsis, *Lilaeopsis masonii* (2)
San Francisco owl's-clover, *Orthocarpus floribundus* (2)
Marin knotweed, *Polygonum marinense* (2)
Tiburon jewelflower, *Streptanthus niger* (1)

(E) -- Endangered
(1) -- Category 1: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(2) -- Category 2: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
(2R) -- Recommended for Category 2 status.

Revised Bay Trail Alignments

#1. (Solano County) Add connector trail extension from Cordelia to Suisun City and to Grizzly Island National Wildlife Refuge.

#2. (San Francisco) Relocate spine trail to Third Avenue. Connect to Candlestick Point State Recreation Area via Yosemite.

#3. (San Francisco) Delete trail connection between Cargo and Yosemite. Change Cargo Way trail from spine trail to spur trail. Extend spur trail along India Basin.

#4. (Santa Clara County) Change trail north and northeast of Palo Alto Airport from existing to proposed spur trail.

#5. (Santa Clara County) Add proposed spur trail around perimeter of Newby Island Landfill.

#6. (Santa Clara County) Add trail connection between Alviso Marina and Newby Island Landfill, using levees between salt ponds and San Jose/Santa Clara Water Pollution Control Plant.

#7. (Alameda County) Relocate trail between Oyster Bay Regional Shoreline and Doolittle Blvd (n/Hegenberger) from Davis St. and Doolittle Blvd to edge of golf course, to avoid rendering plant on Doolittle Blvd.

#8. (Contra Costa County) Add existing observation platform at Wildcat Creek.

#9. (Contra Costa County) Add alternative spine trail alignment along North Richmond Bypass corridor (precise alignment yet to be determined). Add spur trail connection to planned observation platform s/Point Pinole, as shown.

#10. (Sonoma County) Delete Rte 121 between 8th Street (Sonoma) and Rte 37.

#11. (Marin County) Make technical correction: change proposed trail to existing trail n/Frosty Lane.

#12. (Marin County) Add proposed spur trail (corridor, no alignment determined) to connect levee trail n/Miller Creek to development at Hamilton Field.

#13. (Marin County) Make technical corrections to trails within McInnis Park and Los Gallinas Sanitary District levees.

#14. (Marin County) Make technical corrections to alignment of existing trail between Smith Ranch Rd. and McInnis Park.

#15. (Marin County) Make technical correction: show alignment of existing trail along McInnis Parkway.

#16. (Marin County) Delete spine trail between Pickleweed Park and San Rafael Yacht Harbor. [Starkweather] Retain as spur trail proposed Canal Path north of Yacht Harbor.

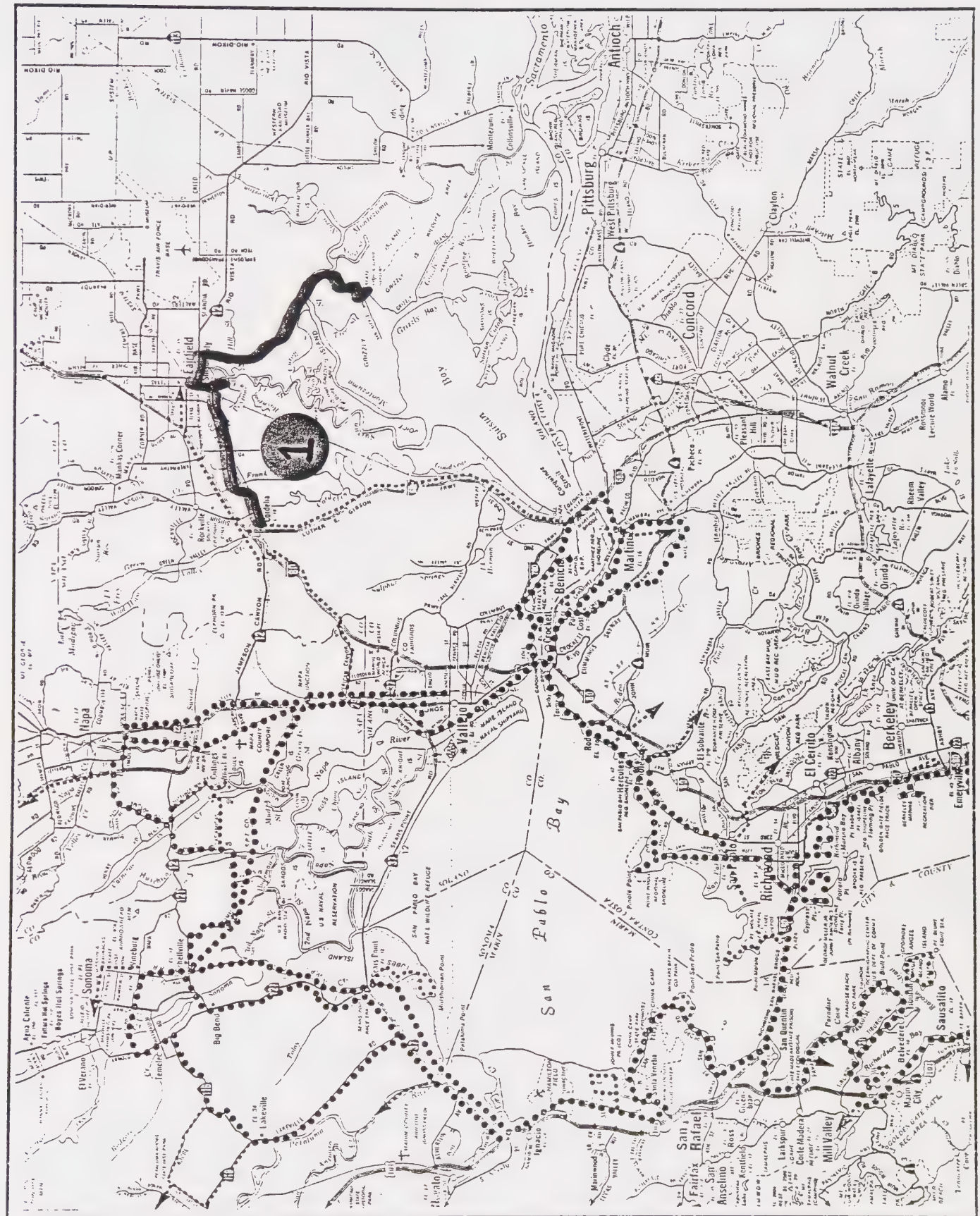
#17. (Marin County) Realign spine trail to Anderson Dr. and future extension of Anderson Dr. (which is planned to incorporate class I bikeway).

#18. (Marin County) Add spur trail connection from San Rafael Shoreline Path to Bellam and along Bellam to Anderson Drive.

#19. (Marin County) Change designation of trail along San Rafael Shoreline Path from spine to spur. Make technical corrections to trail status (segments existing to proposed).

#20. (Marin County) Make technical correction to revise trail alignment currently shown through shopping center.

#21 (Marin County) Add existing connecting trail between vista point and Sausalito Lateral.



The Bay Trail

Spine Trail

Spur Trail

Connector Trail

Proposed Bay Trail

Figure III-1
Plate 1

Approx. Scale 2 0 2 4 miles

N

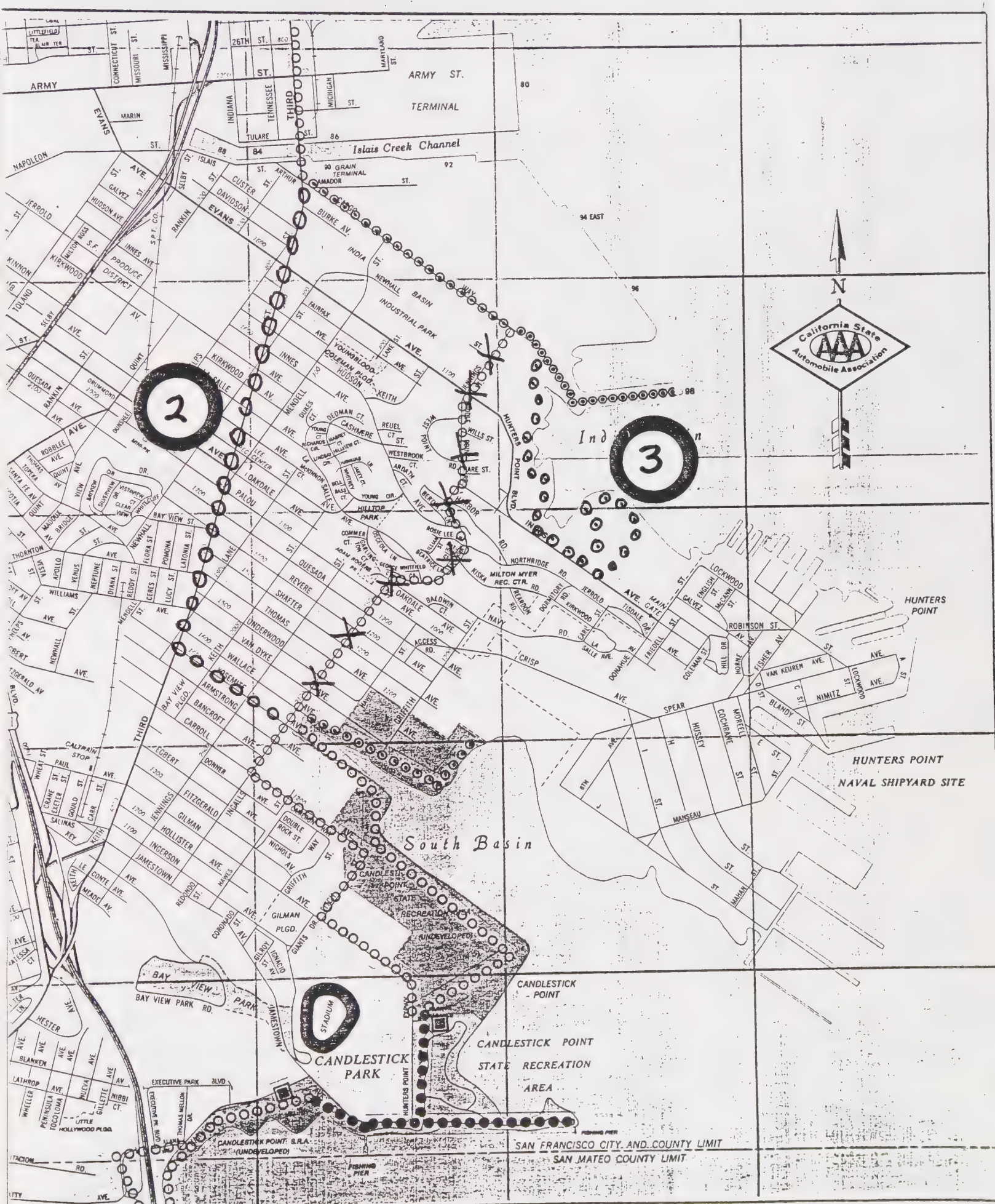
	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
		■■■■■ (bike lane)
Spur Trail	⊙⊙⊙⊙⊙	◕◕◕◕◕
Connector Trail	▮▮▮▮▮▮▶	(same)

Bay Trail Alignment

Figure III-3
Plate 1

Approx. Scale 0.5 0 1 miles

N


ARMY ST.
TERMINAL
Islais Creek Channel
NAPOLEON
EVANS
THIRD
INDIANA
TENNESSEE
MICHIGAN
MARYLAND
MISSISSIPPI
CONNECTICUT
MISSOURI
26TH ST.
TULARE
MARIN
90 GRAIN TERMINAL
94 EAST
96
98
INDIA BASIN INDUSTRIAL PARK
NEWHALL BASIN
HUNTERS POINT BLVD.
HUNTERS POINT
HUNTERS POINT NAVAL SHIPYARD SITE
South Basin
CANDLESTICK POINT STATE RECREATION AREA
CANDLESTICK PARK
STADIUM
BAY VIEW PARK
BAY VIEW PARK RD.
EXECUTIVE PARK BLVD
SAN FRANCISCO CITY AND COUNTY LIMIT
SAN MATEO COUNTY LIMIT
FISHING PIER
CANDLESTICK POINT S.R.A. (UNDEVELOPED)
CALTRAIN STOP
HILLTOP PARK
MILTON MYER REC. CTR.
NORTHRIDGE RD.
NAVY RD.
CRISP AVE.
SPEAR AVE.
BLANDY ST.
NIMITZ
MANSEAU
ACCESS RD.
MAIN GATE
ROBINSON ST.
LOCKWOOD
HUNTERS POINT BLVD.
California State Automobile Association
N
2
3

Bay Trail Alignment

Figure III-3
Plate 3

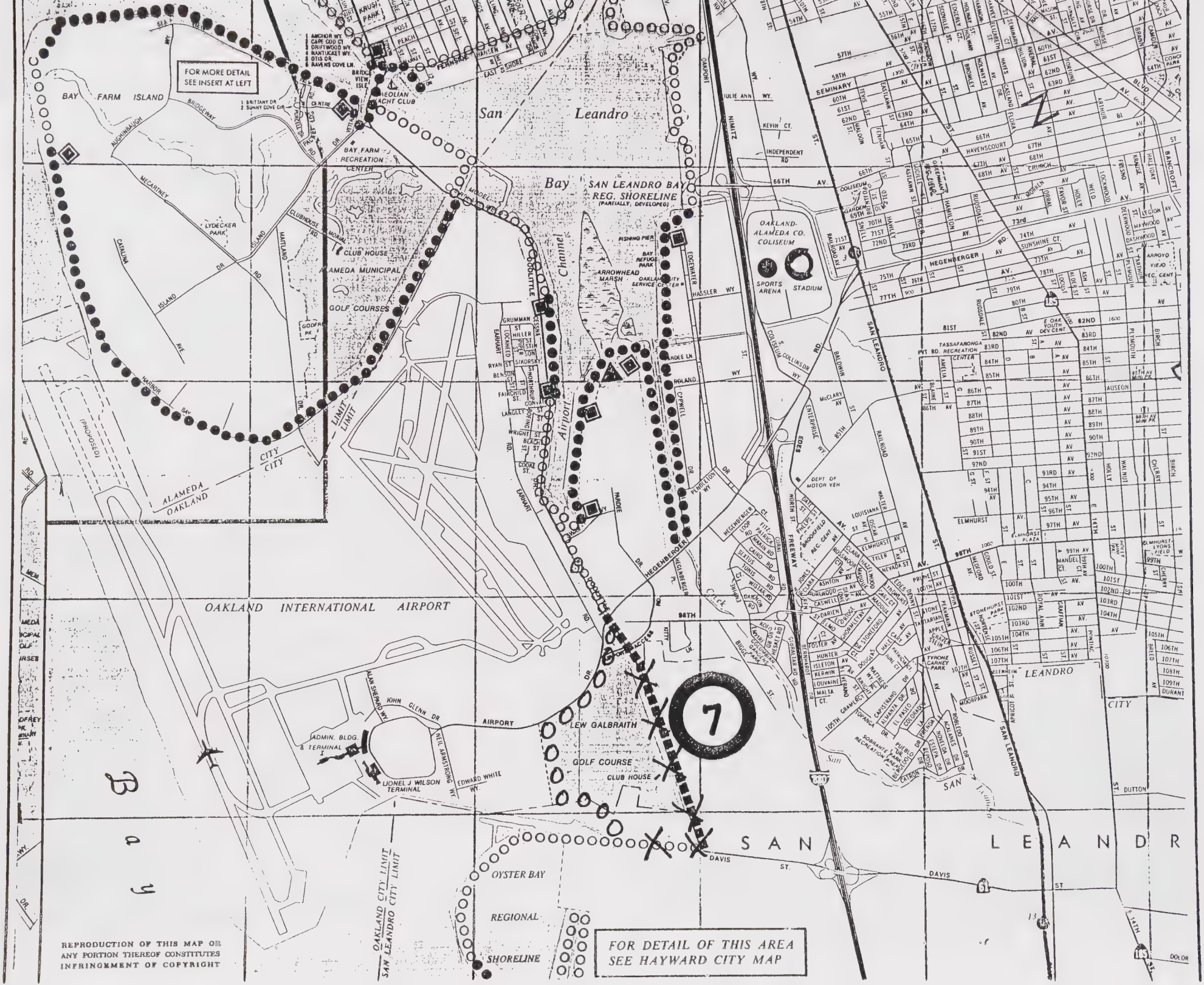
Approx. Scale
0.5 0 1 miles
N

ABAG


4
BAYFRONT PARK
PRESERVE
FREEWAY 101
S.P.T. CO.
COOLEY LANDING
EAST PALO ALTO
MENLO PARK
NAIROBI COLLEGE
PALO ALTO AIRPORT
PALO ALTO MUNICIPAL GOLF COURSE
SAND POINT
HOOKS POINT
BAYLANDS
BAYLANDS ATHLETIC CENT.
NATURE PRESERVE
REFUSE DISPOSAL AREA
STANFORD
STANFORD UNIVERSITY MEDICAL CENTER
STANFORD STADIUM
MAUSOLEUM
MENLO ATHERTON
SHORELINE PARK
MTN.
SAN JOSE, NORTHERN AREA MAP


M I L P I T A S
SANTA CLARA CO.
WARM SPRINGS
UNION PACIFIC
S.P.T. CO.
NIMITZ
FREMONT AIRPORT
MILPITAS DISPOSAL
SAN JOSE-SANTA CLARA SEWAGE DISPOSAL
REFUGE ENVIRONMENTAL EDUCATION CENTER
COUNTY JAIL FARM AND ELMWOOD REHABILITATION CENTER
WILDLIFE REFUGE
5
6
DIXON LANDING RD.
CALAVERAS BLVD.
MILPITAS BLVD.
ALVISO MILPITAS
ZANKER LN.
KATO RD.
SCOTT CR.
PENITENCIA
HALL MEM. PARK
CIVIC CTR
SO. MILPITAS
HAMMOND WY
LEVEE


El Cerrito
Kensington
Albany
Berkeley
Emeryville
Oakland
Alameda
San Leandro
Piedmont
Orinda
Orinda Village
Lafayette Res
Moraga
Richmond
Marina Bay
Pt. Isabel
PT. ISABEL REG. SHORELINE
Fleming Pt.
GOLDEN GATE FIELDS RACE TRACK
BERKELEY MARINA
RECREATION PIER
TILDEN REGIONAL PARK
WILDCAT CAN. RD
SO. PARK DR.
GRIZZLY PEAK
Lk. Anza
UNIV. OF CA. AT BERKELEY
BERKELEY OPEN SPACE
CLAREMONT
SHATTUCK AVE.
UNIVERSITY AV.
SOLANO AV.
ASHBY AVE.
PABLO AVE.
SAN PABLO
CARLSON BLVD
REG. PARK
BEAR CREEK RD.
MINER RD.
CAMINO PABLO
UPPER HAPPY VALLEY RD.
HAPPY VALLEY RD.
LAFAYETTE RES. REC. AREA
GLORIETTA BLVD.
CALDECOTT TUNNEL
ROBERT SIBLEY VOLCANIC REG PRESERVE
SKYLINE BLVD.
HUCKLEBERRY REGIONAL PRESERVE
PINEHURST WAY
RHEEM
MORAGA
TEMESCAL REG REC AREA
BROADWAY
WARREN
MORAGA AV.
OAKLAND BAY BRIDGE
TOLL PLAZA
OAKLAND ARMY BASE
U.S. NAVAL SUPPLY CENTER
U.S. NAVAL AIR STATION ALAMEDA
OAKLAND AV.
GRAND AV.
PARK BL.
LINCOLN AV.
LAKE MERRITT
NIMITZ
FRUITVALE AV.
35TH ST.
REDWOOD FREEWAY
REDWOOD RD.
SKYLINE BLVD.
ANTHONY CHABOT REDWOOD
JOAQUIN MILLER PK.
E. BAY REG. PK. HDQTR'S.
CANYON RD.
CAMINO PINEHURST RD.
WEBSTER ST.
CENTRAL AV.
PARK ST.
HIGH ST.
ROBERT CROWN MEM. STATE BEACH
SAN LEANDRO BAY REG. SHORELINE
BAY FARM IS.
DOOLITTLE DR.
CHEGENBEN
SAN LEANDRO ST.
E. SEMINARY AV.
MacARTHUR BL.
KELLER AV.
14th AV.
KNOWLAND PK. RD.
ESTUDILLO
LAKE
DAVIS ST.
OAKLAND INTERNATIONAL AIRPORT
OYSTER BAY REG. SHORELINE
MARINA
SAN LEANDRO MARINA
WASHINGTON AVE.
FREEWAY
SAN FRANCISCO
BAY
80
580
880
24
13
185
61
Proposed
Existing
Spine Trail
Spur Trail
Connector Trail
(path)
(bike lane)
(same)
Bay Trail Alignment
Figure III-3
Plate 5
Approx. Scale
0.5 0 1
miles
N
Map copyrighted 1986 by the California State Automobile Association. Reproduced by permission.
ABAG


FOR MORE DETAIL SEE INSERT AT LEFT
BAY FARM ISLAND
San Leandro
Bay
SAN LEANDRO BAY REG. SHORELINE (PARTIALLY DEVELOPED)
OAKLAND-ALAMEDA CO. COLISEUM
SPORTS ARENA
STADIUM
BAY FARM RECREATION CENTER
CLUB HOUSE
ALAMEDA MUNICIPAL GOLF COURSES
LYDECKER PARK
MARINA
(PROPOSED)
CITY LIMIT
ALAMEDA
OAKLAND
OAKLAND INTERNATIONAL AIRPORT
Airport
Channel
FISHING PIER
BAY REFUGE PARK
ARROWHEAD MARSH
OAKLAND CITY SERVICE CENTER
EDGEWATER
HASSLER WY
MARDEE LN
ROLAND WY
CAPWELL DR
PLEASANTON WY
HEGENBERGER DR
HEGENBERGER LOOP
HEGENBERGER PL
NIMITZ FREEWAY
SAN LEANDRO
BALDWIN
COLISEUM
COLLINSOR RD
ENTERPRISE
McCLARY AV
DEPT OF MOTOR VEH
RAILROAD
98TH
ADMIN. BLDG & TERMINAL I
LIONEL J WILSON TERMINAL
JOHN GLENN DR
NEIL ARMSTRONG WY
EDWARD WHITE WY
ALAN SHEPARD WY
AIRPORT
LEW GALBRAITH GOLF COURSE
CLUB HOUSE
7
OYSTER BAY REGIONAL SHORELINE
OAKLAND CITY LIMIT
SAN LEANDRO CITY LIMIT
DAVIS ST
SAN LEANDRO
LEANDRO CITY
SAN LEANDRO CREEK
SORBANTI RECREATION AREA
TYRONE CARNEY PARK
ELMHURST
ELMHURST PLAZA
ELMHURST LYONS FIELD
MANOR PARK
ARROYO VIEJO REC. CENT
TASSAFARONGA PVT RD. RECREATION CENTER
E OAK YOUTH DEV CENT
DUTTON ST
DOLOR
FOR DETAIL OF THIS AREA SEE HAYWARD CITY MAP
REPRODUCTION OF THIS MAP OR ANY PORTION THEREOF CONSTITUTES INFRINGEMENT OF COPYRIGHT

	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
		■■■■■ (bike lane)
Spur Trail	⊙⊙⊙⊙⊙	◪◪◪◪◪
Connector Trail	▮▮▮▮▮▮▮▮▶	(same)

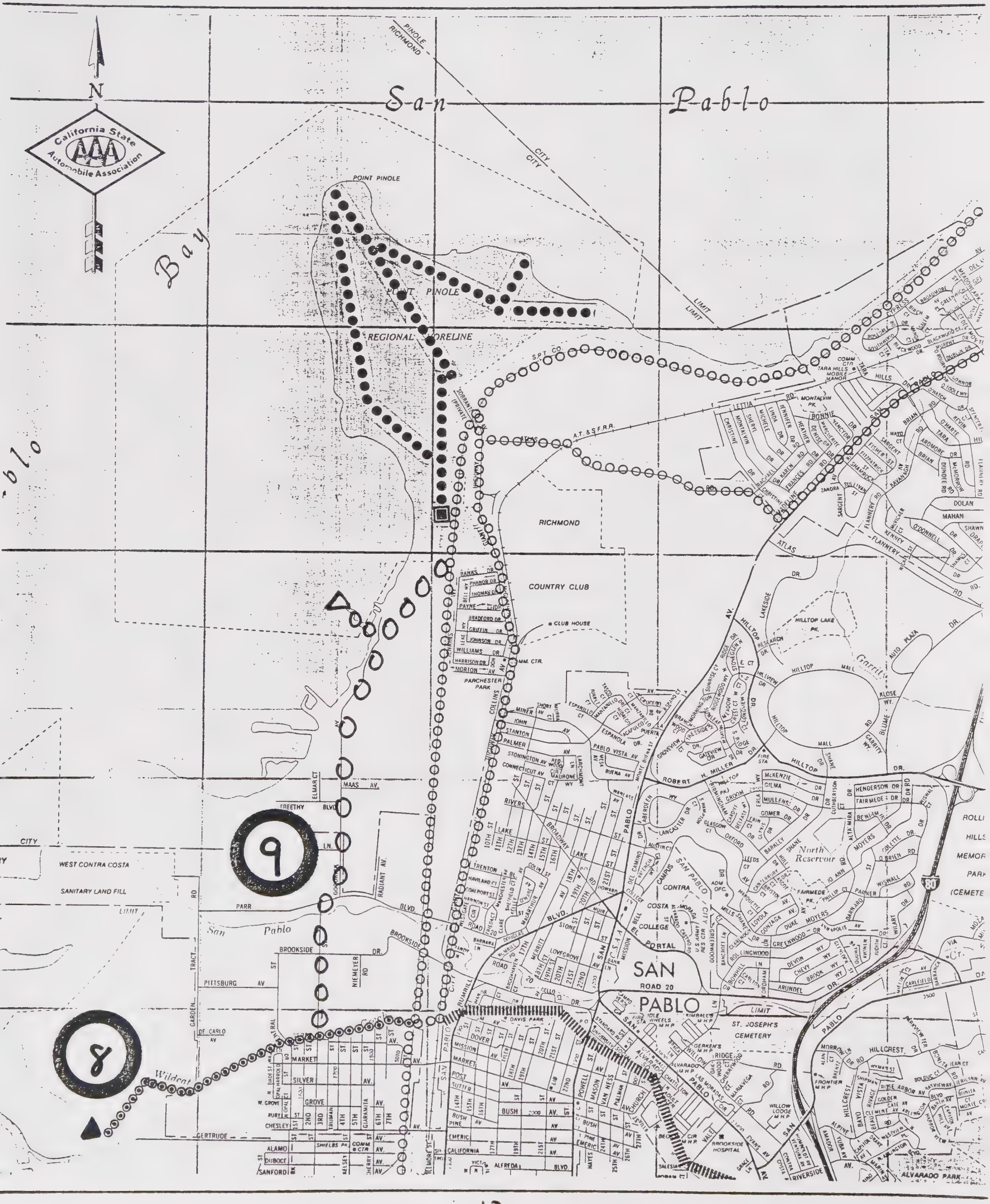
Bay Trail Alignment

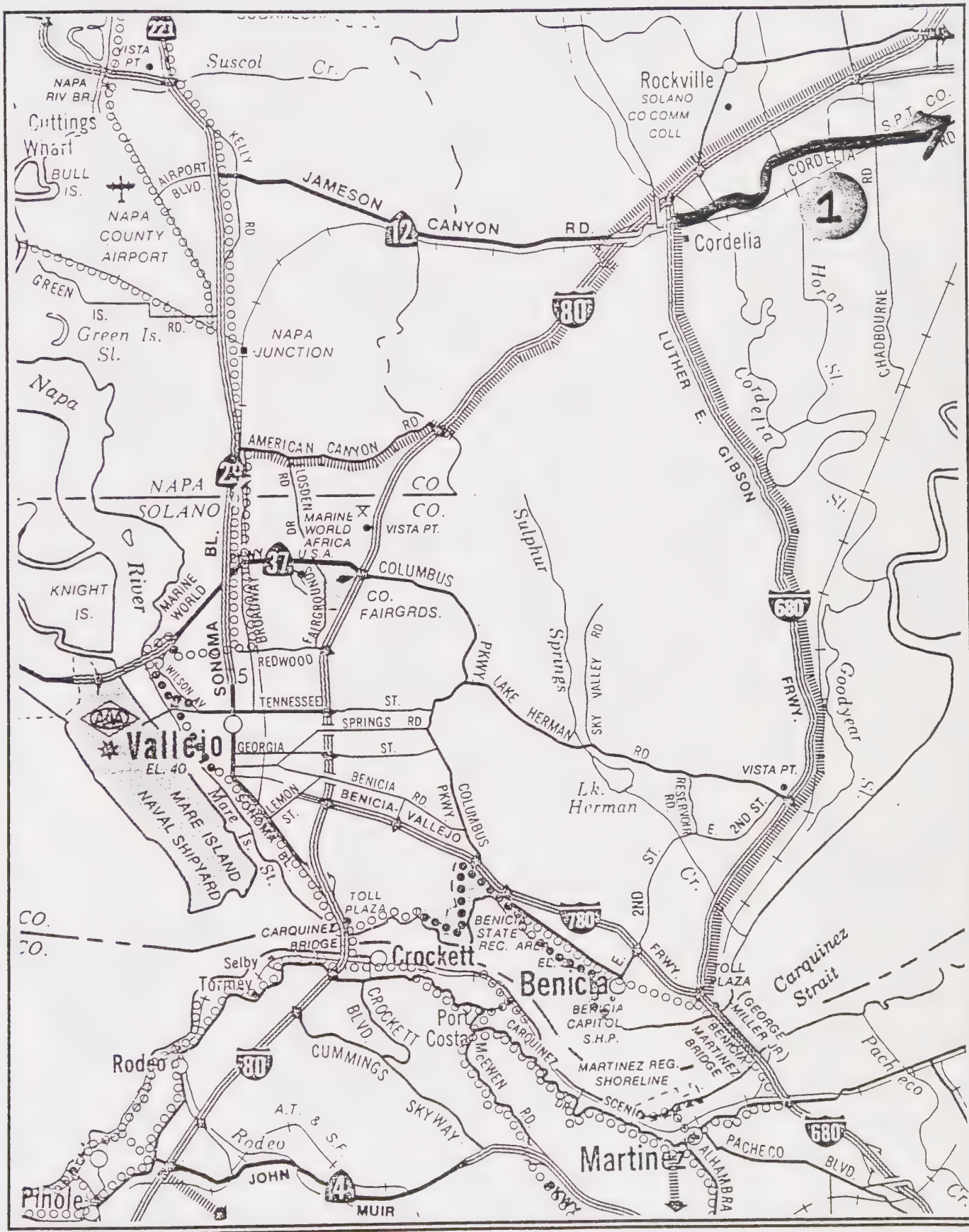
Figure III-3
Plate 6

Approx. Scale 0.5 0 1 miles

N

ABAG


N
California State Automobile Association
San Pablo
Bay
POINT PINOLE
POINT PINOLE
REGIONAL SHORELINE
RICHMOND
COUNTRY CLUB
CLUB HOUSE
PARCHESTER PARK
WEST CONTRA COSTA
SANITARY LAND FILL
HILLTOP LAKE PK.
North Reservoir
CONTRA COSTA COLLEGE
SAN PABLO
ST. JOSEPH'S CEMETERY
BROOKSIDE HOSPITAL
ALVARADO PARK
TARA HILLS MOBILE MANOR
9
8



	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path) ■■■■■ (bike lane)
Spur Trail	⊙⊙⊙⊙⊙	◪◪◪◪◪
Connector Trail	▮▮▮▮▮▶	(same)

Bay Trail Alignment

Figure III-3
Plate 7

Approx. Scale 0.5 0 1 miles

N

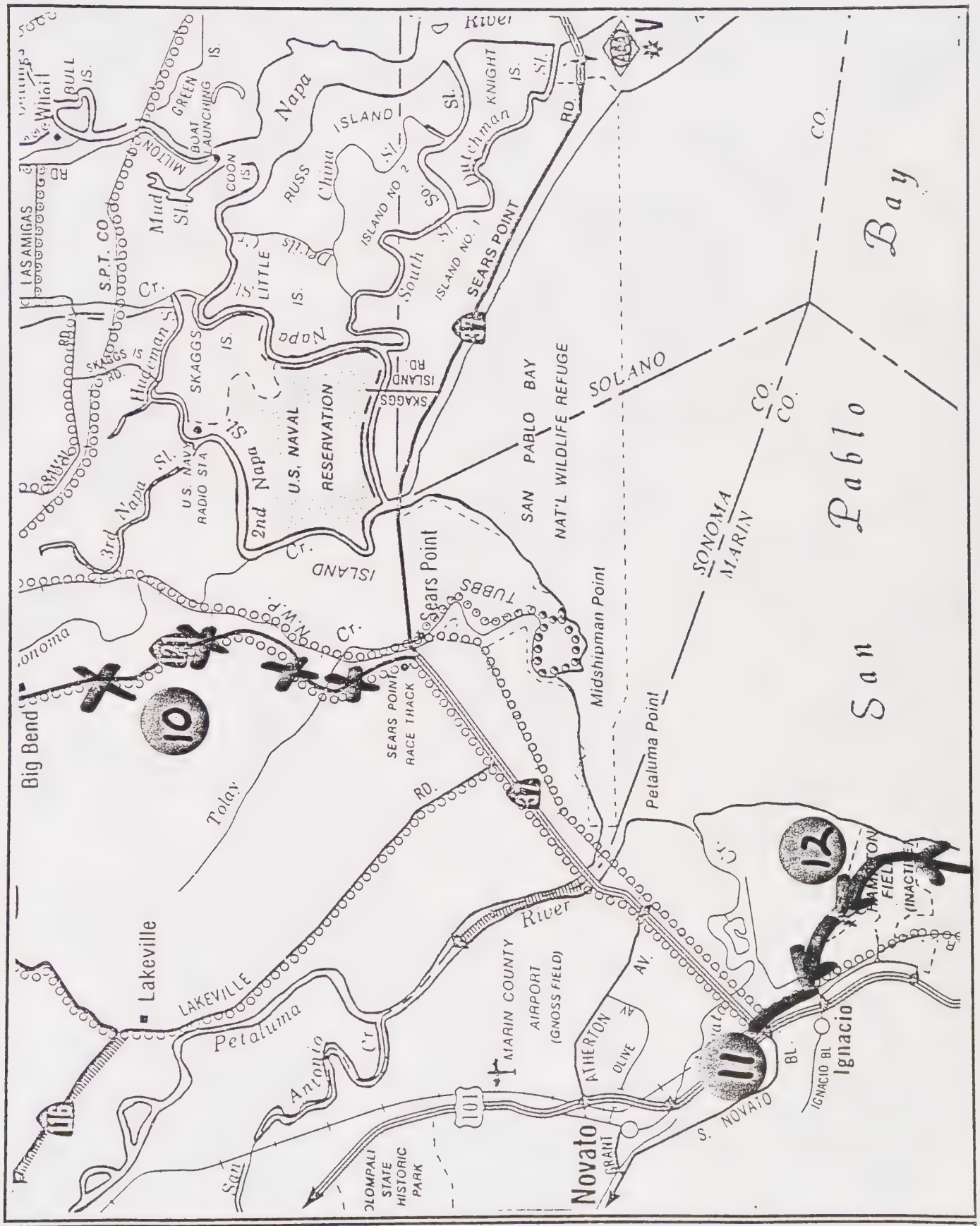
Bay Trail Alignment

Figure III-3
Plate 8

Approx. Scale 0.5 0 1 miles

N

ABAG



The Bay Trail

	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
		■■■■■ (bike lane)
Spur Trail	⊙⊙⊙⊙⊙	◕◕◕◕◕
Connector Trail	▮▮▮▮▮▮▮▮▶	(same)

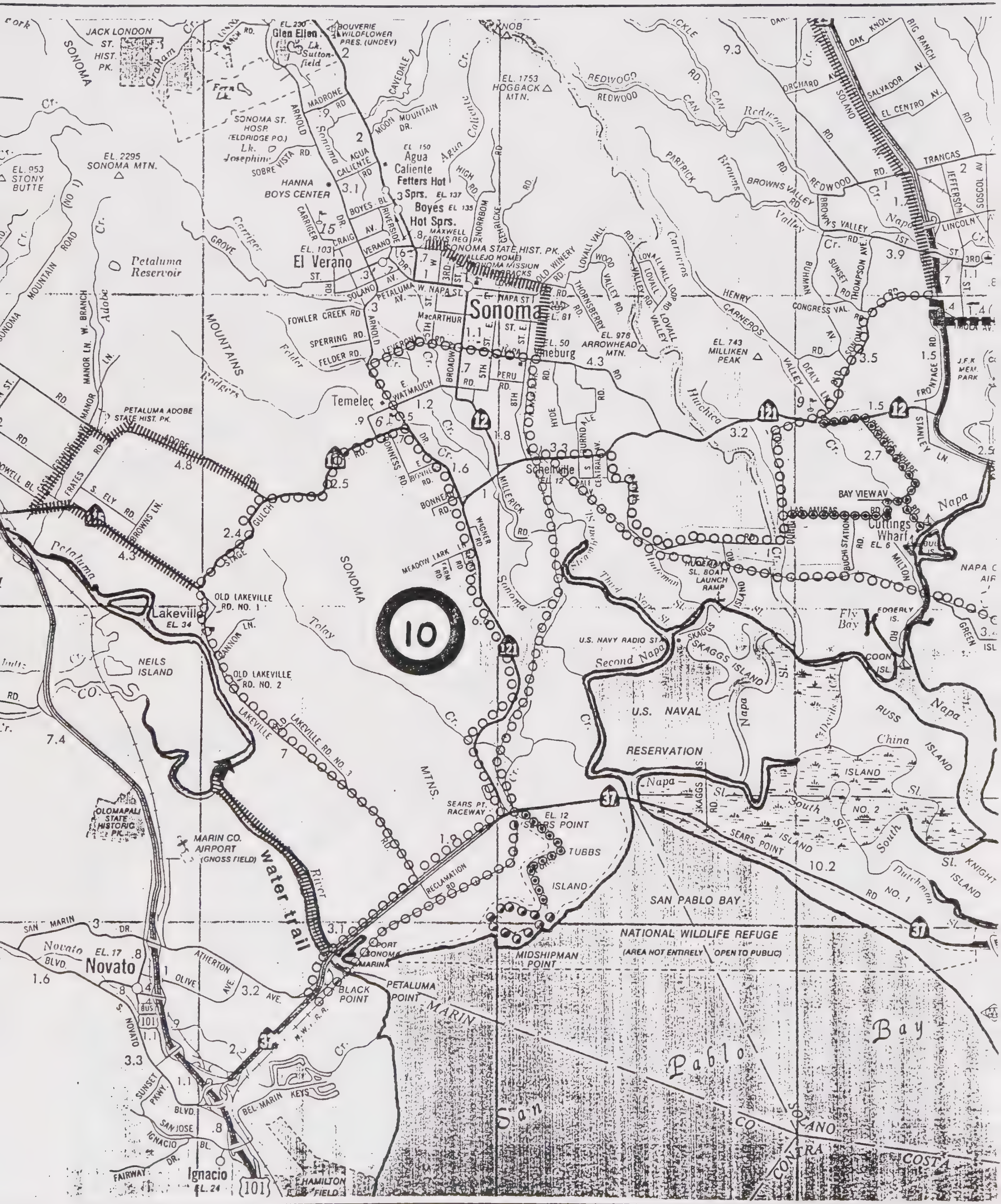
Bay Trail Alignment

Figure III-3
Plate 9

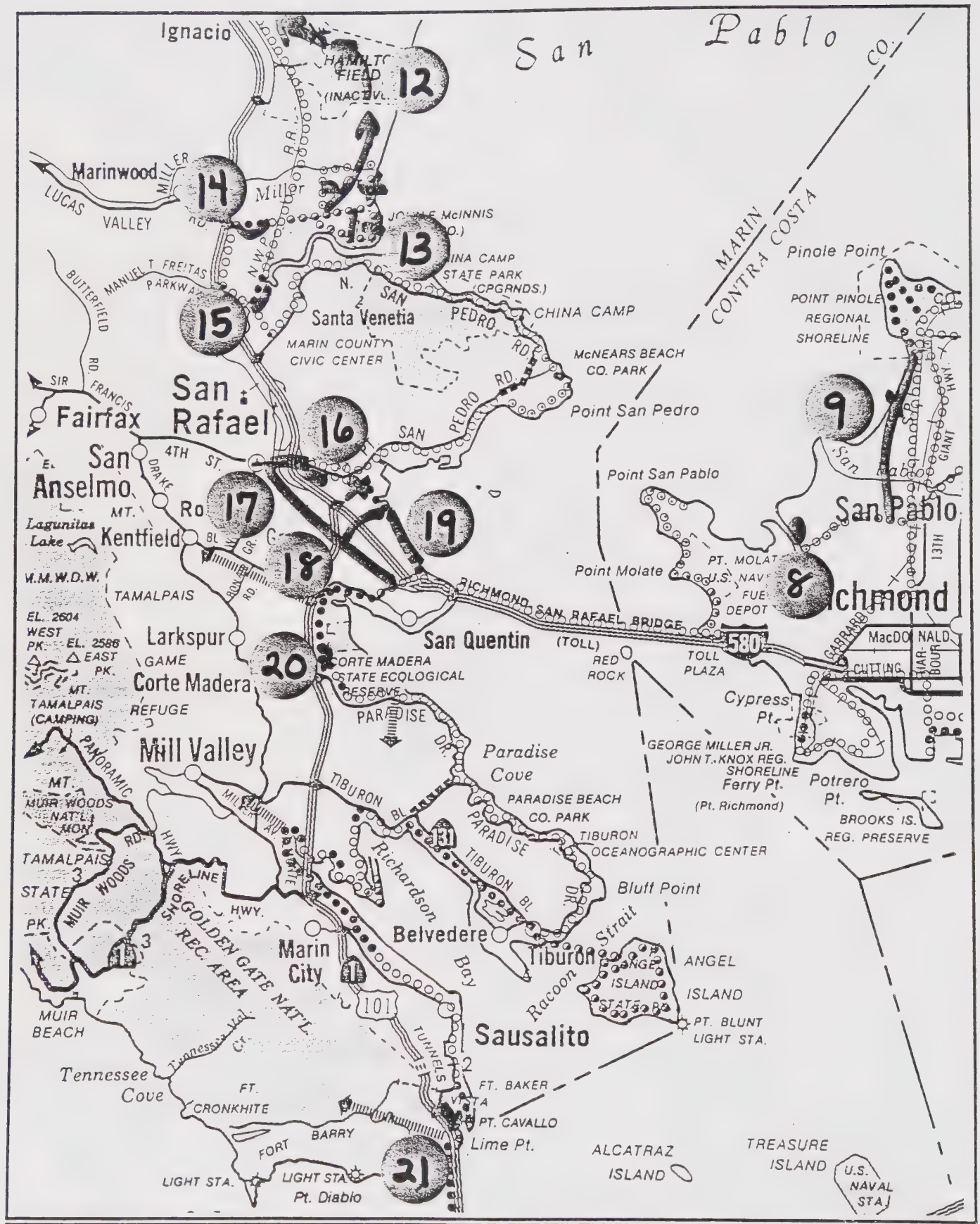
Approx. Scale 0.5 0 1 miles

N

ABAG


JACK LONDON ST. HIST. PK.
SONOMA
Glen Ellen
BOUVERIE WILDFLOWER PRES. (UNDEV)
Sutton-field
EL. 1753 HOGBACK MTN.
REDWOOD
SONOMA ST. HOSP. (ELDRIDGE P.O.)
Lk. Josephine
EL. 2295 SONOMA MTN.
EL. 953 STONY BUTTE
HANNA BOYS CENTER
Agua Caliente
Fetters Hot Sprs.
Boyes Hot Sprs.
El Verano
Petaluma Reservoir
SONOMA STATE HIST. PK.
Sonoma
FOWLER CREEK RD.
SPERRING RD.
FELDER RD.
MOUNTAINS
Temelec
EL. 50
ARROWHEAD MTN.
EL. 743 MILLIKEN PEAK
TRANCAS
BROWNS VALLEY
Napa
CONGRESS VAL.
J.F.K. MEM. PARK
PETALUMA ADOBE STATE HIST. PK.
Schellville
BAY VIEW AV.
Cuttings Wharf
SONOMA
10
MEADOW LARK LN.
Lakeville
OLD LAKEVILLE RD. NO. 1
NEILS ISLAND
OLD LAKEVILLE RD. NO. 2
LAKEVILLE RD. NO. 3
U.S. NAVY RADIO STA.
SKAGGS ISLAND
Second Napa
U.S. NAVAL RESERVATION
China ISLAND
RUSS ISLAND
MTNS.
SEARS PT. RACEWAY
SEARS POINT
TUBBS ISLAND
OLOMPALI STATE HISTORIC PK.
MARIN CO. AIRPORT (GNOSS FIELD)
water trail
SAN PABLO BAY
NATIONAL WILDLIFE REFUGE (AREA NOT ENTIRELY OPEN TO PUBLIC)
MIDSHIPMAN POINT
PORT SONOMA MARINA
BLACK POINT
PETALUMA POINT
Novato
Ignacio
BEL-MARIN KEYS
HAMILTON FIELD
San Pablo Bay
MARIN
SOLANO
CONTRA COSTA

Novato
Creek
NOVATO
CITY
MONTEGO
BEL MARIN
KEYS
BLVD.
11
12
BEL-MARIN
HAMILTON
PIMENTEL CT.
LEVERONI CT.
DIGITAL
DR.
IGNACIO
COMMERCIAL
BLVD
PAMARON WY
OWENS
NORMAN
MORGAN
ENTRADA
FIRE STA
ALAMEDA
DEL
PRADO
HERBOSA
ARBOLEDA
EL ARROYO PL
SEVILLE WY.
LAS PALMAS AV
NORTHWESTERN
WAREHOUSE
SKEET RANGE
RD
PERIMETER
ROAD
LIMIT
STATE
GATE
ACCESS
AEROBEEN
HANGAR
HAMILTON
ARMY
AIRFIELD
MAIN ENTRANCE
OAKWOOD
SAN JOSE
CRESCENT
PACIFIC
SAN PABLO
NORTH CIR.
SUNSET
CALIENTE
SOUTH CIR
SEQUOIA
LOMAS
BOLLING
KELLY
RANDOLPH
PATTERSON
SCOTT
STOVER
MARIN
VALLEY
SCENIC
VIEW RIDGE
SUNRISE LN.
CLUBVIEW
NOVATO
REDWOOD
HWY
101
TO SAN RAFAEL & SAN FRANCISCO
PELICAN LN.
VELASCO
PRADO
1 CALIFORNIA CONDOR WY
2 CINNAMON TEAL LN
3 ELEGANT TERN RD
4 HUMMINGBIRD WY
5. PRAIRIE FALCON DR

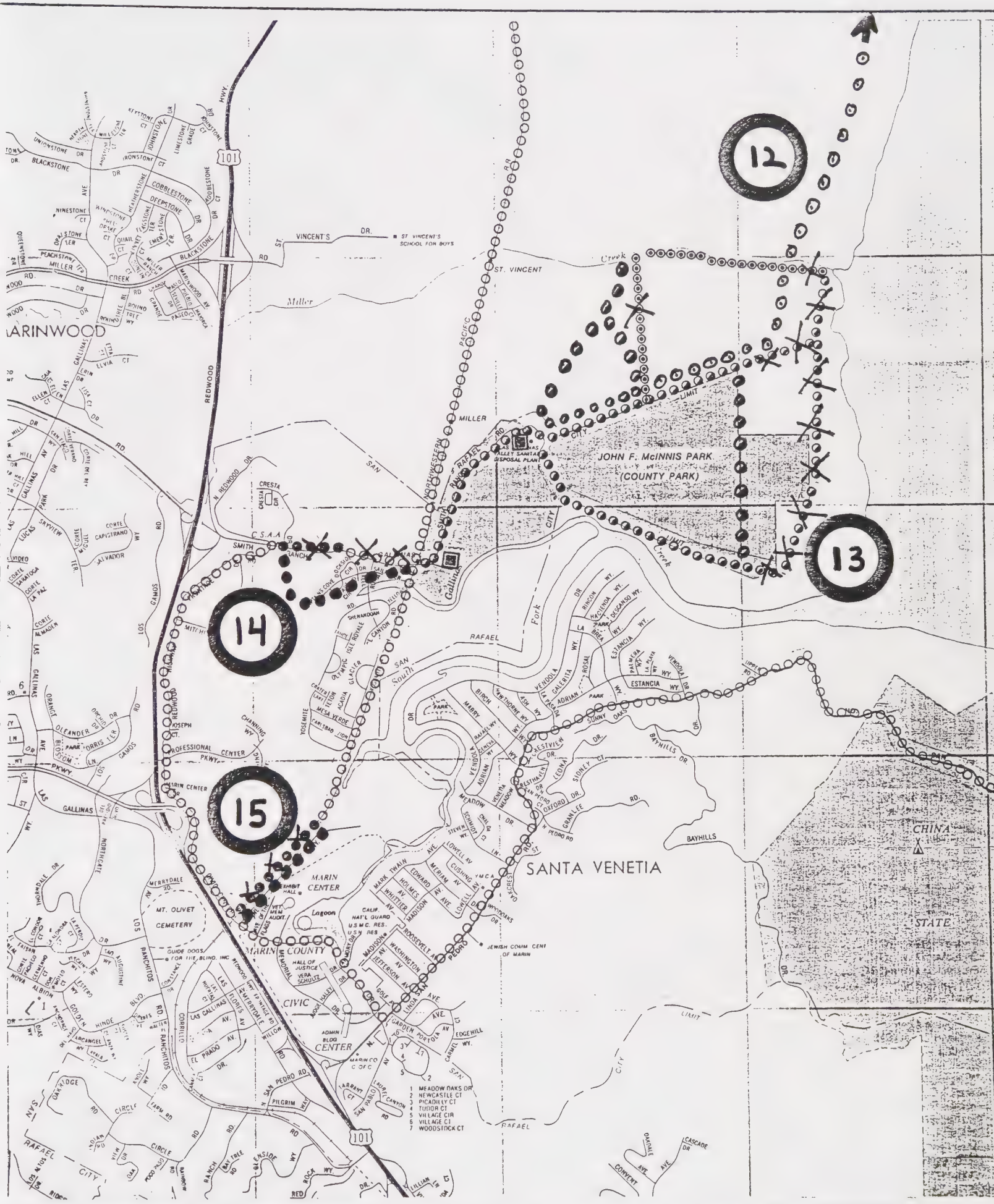


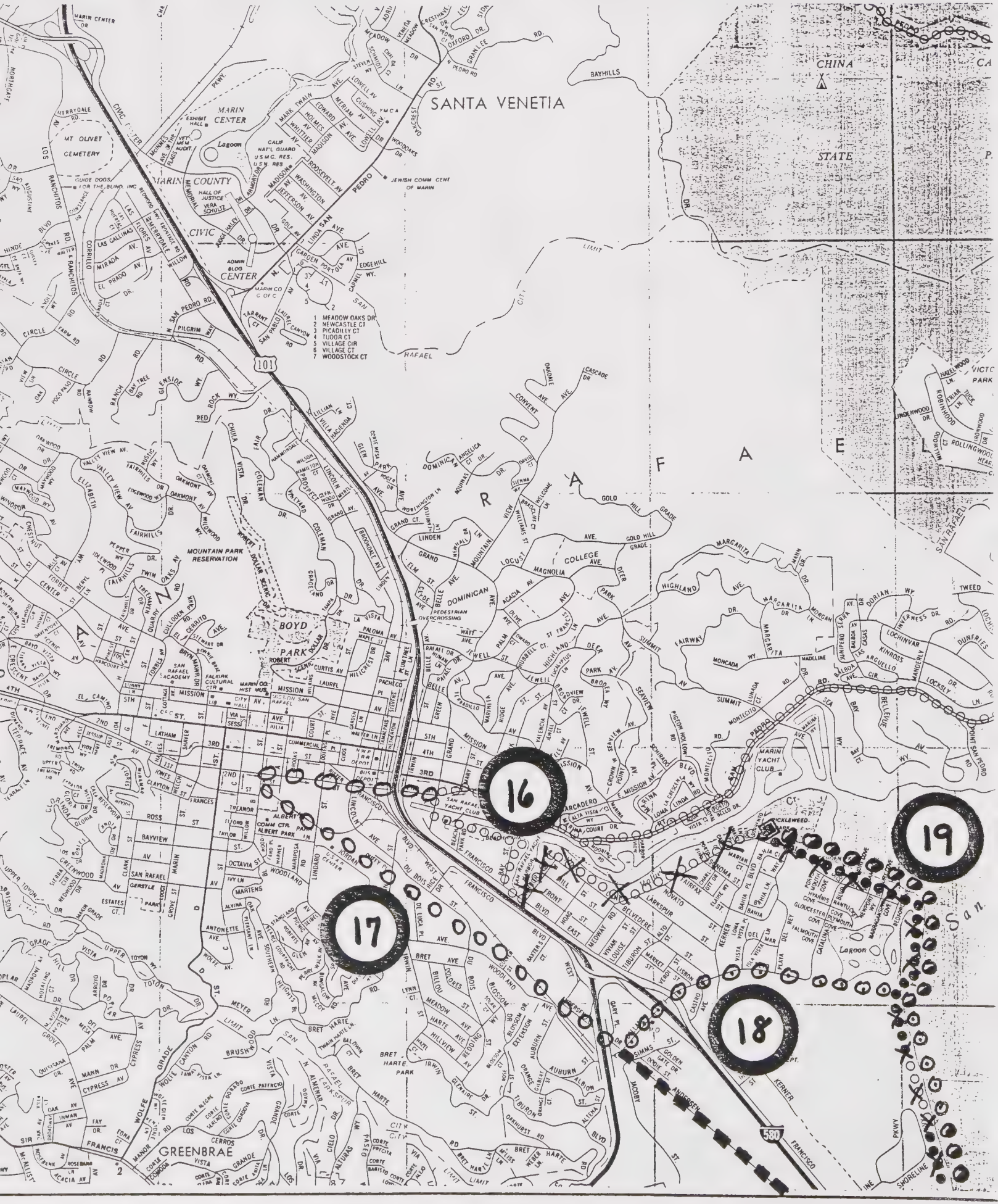
Bay Trail Alignment

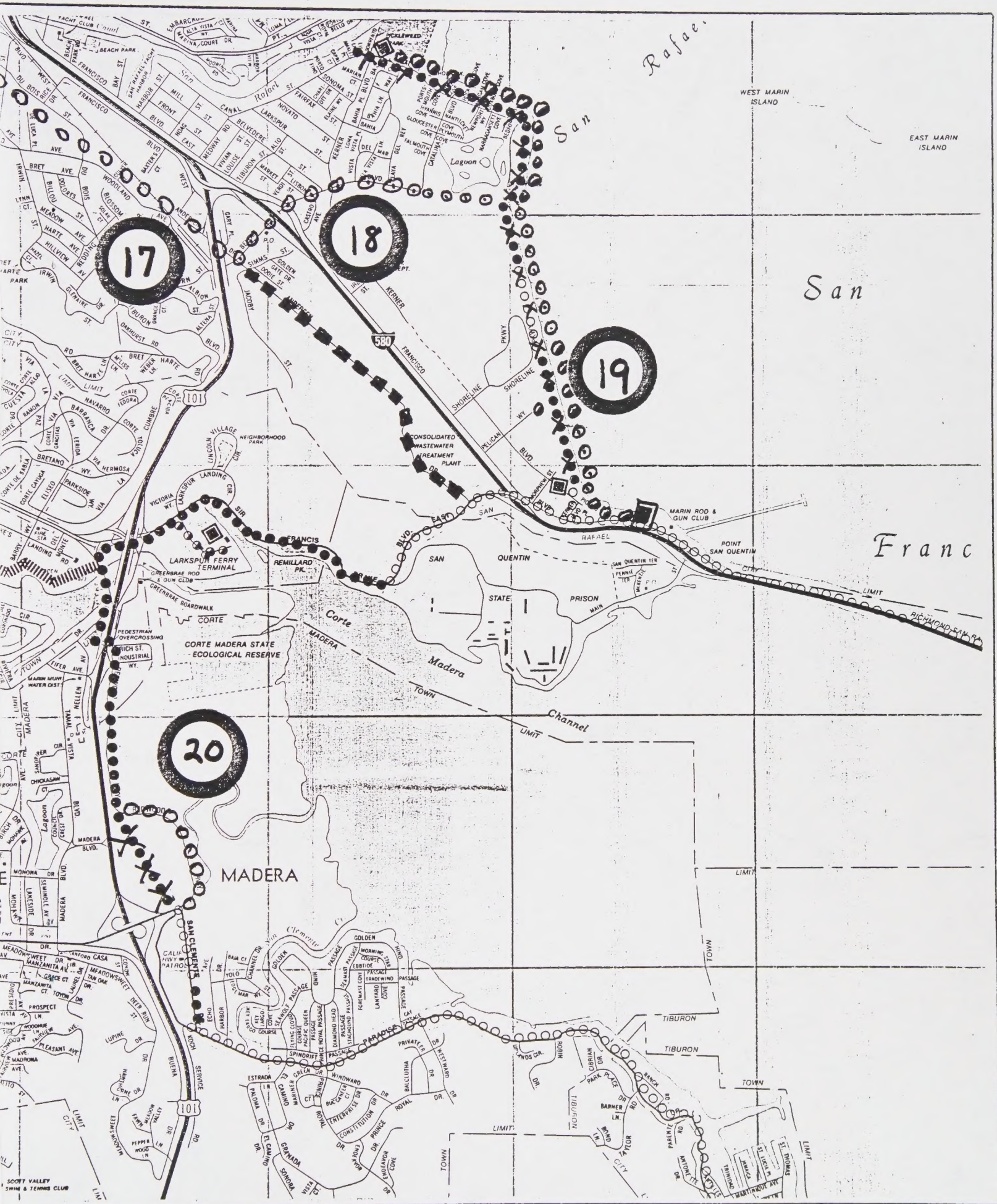
Figure III-3
Plate 10

Approx. Scale 0.5 0 1 miles

N


12
13
14
15
JOHN F. McINNIS PARK
(COUNTY PARK)
SANTA VENETIA
MARIN CENTER
MARIN COUNTY CIVIC CENTER
MT. OLIVET CEMETERY
Lagoon
Miller Creek
St. Vincent Creek
San Rafael Creek
North Fork
REDWOOD
LOS GAMOS
SAN RAFAEL
CHINA
BAYHILLS
1 MEADOW OAKS DR
2 NEWCASTLE CT
3 PICADILLY CT
4 TUDOR CT
5 VILLAGE CIR
6 VILLAGE CT
7 WOODSTOCK CT


SANTA VENETIA
MARIN CENTER
MARIN COUNTY CIVIC CENTER
MT OLIVET CEMETERY
SAN RAFAEL
BOYD PARK
MOUNTAIN PARK RESERVATION
GREENBRAE
BRET HARTE PARK
MARIN YACHT CLUB
CHINA
STATE
Lagoon
16
17
18
19
580
101


17
18
19
20
San Rafael
WEST MARIN ISLAND
EAST MARIN ISLAND
Lagoon
San Francisco Bay
580
101
CONSOLIDATED WASTEWATER TREATMENT PLANT
LARKSPUR FERRY TERMINAL
REMILLARD PK.
MARIN ROD & GUN CLUB
POINT SAN QUENTIN
SAN QUENTIN STATE PRISON
CORTE MADERA STATE ECOLOGICAL RESERVE
Corte Madera Channel
MADERA
TIBURON
SCOTT VALLEY SWIM & TENNIS CLUB


SAUSALITO
Bay
MANZANITA CENTER
CLIPPER YACHT HARBOR BASIN 3
CLIPPER YACHT HARBOR BASIN 2
MARINSHIP YACHT HARBOR 1
MARINSHIP YACHT HARBOR 2
CLIPPER YACHT HARBOR BASIN 1
PELICAN YACHT HARBOR
SAUSALITO YACHT HARBOR
SAUSALITO POINT
SAUSALITO YACHT CLUB
SAUSALITO FERRY
MUNICIPAL FISHING PIER
CONE ROCK
SAUSALITO LATERAL
U.S.A. RESERVE CENTER
FORT BAKER
U.S. MIL. RES.
YELLOW BLUFF
Horseshoe Bay
PRESIDIO YACHT CLUB
POINT CAVALLO
RECREATION AREA
U.S. ARMY HOUSING
FORT BARRY
EQUESTRIAN FACILITY (MILITARY PERSONNEL ONLY)
BARRY-BAKER TUNNEL
TUNNELS
LIME POINT
Kirby Cove
LIGHT STA.
POINT DIABLO
Golden Gate
BRIDGE
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